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THE UNIVERSITY OF ALBERTA
COUNTRY RESIDENTIAL DEVELOPMENT IN THE EDMONTON AREA TO 1973:
A CASE STUDY OF EXURBAN RESIDENTIAL GROWTH

by



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ABSTRACT

This study was designed to identify and investigate the spatial pattern of a form of exurban residential land use and development, termed country residential, as it has evolved in the environs of the City of Edmonton. On the basis of general expectations gained through a review of the literature, the study proposed to identify the form of exurban residential growth and to identify physical, social, economic, and institutional factors which have contributed to the pattern assumed by this particular land use through time. The data were analyzed to identify the distinguishing characteristics of the country residential population, to identify the impact of institutional factors on the pattern of development, and to identify the pattern of development which has evolved.

In general, the findings of the study showed that:

1. Exurban residential growth in the Edmonton area has assumed a pattern that is characteristic of most major North American urban centres.
2. The predominant factor motivating families to move to the fringe was a lifestyle preference for country living.
3. The predominant factor influencing the pattern of subdivision and development for country residential purposes is access to the City of Edmonton.

4. The competition for land in Edmonton's fringe and shadow has resulted in the loss of prime agricultural land.
5. The characteristics of the country residential population are typical of fringe residents in other North American cities.
6. Institutional controls have had a minimal impact on the pattern of country residential development.

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Chapter 1

INTRODUCTION, STATEMENT OF GOALS, LITERATURE REVIEW

The major purpose of this study is to identify and investigate the spatial pattern of a form of exurban residential land use and development, termed country residential, as it has evolved in the environs of the City of Edmonton. It is proposed to identify physical, social, economic, and institutional factors which have in some way contributed to the pattern assumed by this particular land use through time.

BACKGROUND TO THE PROBLEM

Urban Growth in Canada

Canada is rapidly becoming one of the world's most urbanized nations. In 1961, when Canada's population was 69.6 percent urban, it was already ranked eighth in the world.¹ Only the United States and some western European countries were more highly urbanized (Jackson, 1973). By 1971, the population was 76 percent urban, with a major concentration in a relatively small number (22) of rapidly expanding large urban centres. For a number of historic and economic reasons, most of these centres are situated in eastern Canada, but two of the fastest growing, Calgary and Edmonton are located in the Province

¹Statistics Canada includes the population of all cities, towns, villages, and unincorporated settlements greater than 1,000 persons, and built up fringe areas (population greater than 1,000 per square mile) of incorporated areas of 5,000 persons or greater in its 'urban' classification.

of Alberta (Lithwick, 1970).

Population Shifts in Alberta

The prairie provinces, while often looked upon as basically agricultural, have not been immune from the pressures of urban growth. During the last several decades, the censuses have revealed a definite trend towards urban living throughout the prairies. The rural farm population, the proportion of the rural population which derives its major source of income from agricultural pursuits, declined absolutely during the 1921 to 1971 period, while the total nonfarm population has grown considerably (Anderson, 1966; Statistics Canada, 1971). In the Province of Alberta the total rural population has shown a general decrease in most areas though there have been some radical upward fluctuations in the populations of small communities in close proximity to the large urban centres. Table 1.1 illustrates the extent to which this has occurred in the Edmonton area. It is evident from the table that most of the area's growth is occurring outside the corporate limits of the city. In fact, the percentage of the area's population growth that has concentrated in the city has steadily diminished from a high of 96.3 percent in the 1951 to 1956 period to only 21.5 percent in the 1971 to 1973 period. While most of the growth in recent years has occurred in urban centres with populations greater than 1,000 persons, a considerable growth has also occurred in smaller rural communities (Table 1.2). Ardrossan, a small centre ten miles east of Edmonton, experienced a large increase in population in the last

Table 1.1

Urban Area Population 1951-1973

	1951	1956	1961	1966	1971	1973
City of Edmonton ¹	170,929	246,561	320,598	376,925	438,152	442,365
Sherwood Park	3	-	2,923	6,339	14,282	22,164
St. Alberta	1,129	1,320	4,059	9,736	11,800	15,088
Fort Saskatchewan	1,076	2,582	2,972	4,152	5,726	6,756
Leduc	1,842	2,008	2,356	2,856	4,000	5,271
Spruce Grove	-	309	465	598	3,029	4,256
Stony Plain	878	1,098	1,311	1,397	1,770	1,919
Devon	842	1,429	1,418	1,283	1,468	1,502
Morinville	892	957	935	995	1,475	1,483
Calmar	944	730	700	600	799	845
Gibbons	-	-	192	230	551	723
Legal	523	457	524	572	563	683
Thorsby	385	411	419	583	595	604
Beaumont	-	-	194	234	337	412
Bon Accord	-	141	175	147	332	398
New Sarepta	-	-	184	173	202	220
Total	179,440	258,003	339,497	406,820	485,081	504,689

¹ City of Edmonton population figures for 1951, 1956, and 1961 include the communities of Beverly and Jasper Place which were annexed to the city at a later date.

² Population figures from 1951 to 1971 are as of June 1. Figures for 1973 are as of January 31.

³ Population figures are not available.

Source: Edmonton Regional Planning Commission: Growth Studies, Background, Paper 3, 1974, p.12

15 years. Wernerville, Strathcona Heights, Queensdale Place, Lindale, Hulbert Crescent, Hurstwood Park, all country residential subdivisions which showed no recorded population prior to 1966, have grown considerably since (Department of Municipal Affairs, 1970). As these subdivisions are all located within 15 miles of Edmonton, it is evident that significant increases in the rural nonfarm population have also taken place in the countryside adjacent to the city in recent years.

Table 1.2

Percentage Share of 'Urban' Sub Region
Population Growth, 1956-1973

	1951 to 1956	1956 to 1961	1961 to 1966	1966 to 1971	1971 to 1973
City of Edmonton	96.3	90.8	83.7	78.2	21.5
Sherwood Park and St. Albert	- ¹	-	13.5	12.8	57.0
Other Communities over 1000 population (1971)	-	-	2.7	7.9	19.0
Communities less than 1000 population (1971)	-	-	0.1	1.1	2.5

¹ Data not available in a suitable format

Source: Edmonton Regional Planning Commission, Growth Studies,
Background Paper 3, 1974, p.13.

The term 'rural nonfarm' as it is used for census purposes refers to that segment of the population which does not depend on agriculture for its primary source of income, but which nevertheless resides in a rural setting. Included in this population are unincorporated communities

with a population of less than 1,000 persons and the residents of small acreage parcels and rented farmhouses whose main source of income is derived from activities which are nonagricultural.

Although quite recent in Edmonton, increases in the rural nonfarm component of the population in the 'fringe' areas of large metropolitan centres is by no means a new occurrence. Large increases around American cities are well documented as far back as the 1930s and 1940s (Andrews, 1942, 1945; John, 1941; Tate, 1934; Batschlet, 1941; Arensburg and Kimball, 1968). A similar, although considerably later literature, pertaining to the problems caused by the land use patterns resulting from this aspect of the process of urbanization, has been written on the larger Canadian metropolitan centres, most notably Toronto and its environs, Calgary, Winnipeg, and Vancouver. To date very little has been done in the Edmonton area to determine what effect this sudden increase in population has had on the rural area adjacent to the city. A number of crucial issues should be dealt with:

- (1) What is the extent of exurban development around Edmonton?
- (2) What forms of land use are becoming characteristic?
- (3) Where is this development taking place?
- (4) What factors affect its distribution?
- (5) What are the characteristics of the populations concerned?
- (6) What factors motivate people to locate in rural areas?
- (7) Where do these people come from?
- (8) What factors are considered in the selection of a country residential site?

These issues must be investigated if the Edmonton area is to avoid the serious problems created by uncontrolled growth that have occurred in other urban areas in North America. In this study, it is proposed to investigate one aspect of this periurban population increase, the development of country residential subdivisions in the vicinity of Edmonton in the hope of providing some of the answers to the questions raised above. The results should be of value to local political and planning authorities and will help fill a gap in the literature that is too readily apparent - that is, the process of periurban growth which is taking place in medium-sized Canadian cities.

Country Residential Land Use: Defined

The rural nonfarm category of the population includes three distinct sub-populations:

- (1) Those persons living in small unincorporated centres with a population of less than 1,000 persons.
- (2) Those people living on small acreage allotments whose prime source of income is derived from activities not related to agriculture.
- (3) Those people residing in rented farmhouses whose prime source of income is derived from activities not related to agriculture.

For the purpose of this study, the definition of country residential land use in The Subdivision and Transfer Regulation, 215/67, will be accepted:

"country residence use" means the use of land not included in an urban municipality that is used for the purpose solely of a country residence, or as a subordinate use to the residence may include minor agricultural pursuits, small holdings, animal breeding, plant nurseries or uses of like character, but does not include intensified agricultural uses.

From this, it is clear that only sub-section (2) of the rural nonfarm population will be studied. The residents of rented farmhouses are not included because of the limited availability of data pertaining to them.

STATEMENT OF STUDY GOALS

The goals of this study are:

- (1) To identify the extent of small holding and country residential subdivision in the urban fringe and shadow of the City of Edmonton.

Note: small holdings have been included as many of them have have assumed the same function as country residences.

- (2) To identify the rate at which subdivisions have been created and developed within each individual municipality and the study area in total.
- (3) To identify factors which influence the rate and distribution of both subdivision and development.
- (4) To determine the social, and demographic factors which have, in the past, created a demand for this form of periurban residential development.

LITERATURE REVIEW

Physical Forms of Urban Growth

The characteristic form of urban growth that has been assumed in North American cities over time is that of a constant movement outward from densely populated city centres into sparsely settled rural countryside. For a variety of economic, social, and personal reasons, not all of this movement has been contiguous with the edge of the built up city; rather, a haphazard invasion has taken place. Characteristically, a zone of transition, neither completely urban nor completely rural, evolves at the edge of the 'built up' city and extends far into the rural countryside. This zone of transition, first identified in the literature by T. L. Smith in 1937, has been the object of intensive study by geographers and other social scientists ever since (Pryor, 1968).

Much effort has been devoted to attempts to define this zone, but a considerable amount of confusion over terminology has been the chief result. Terms such as country-city fringe, rurban fringe, rural-urban fringe, suburban zone, slurb, exurb, scatterization, sprawl, fringe, commuting zone, dispersed city, and urban shadow have all been used, sometimes interchangeably, but more often not, to define part or all of this zone (Pryor, 1968; Pahl, 1964; Kurtz and Eicher, 1958; Hind-Smith, 1962; Martin, 1953; Russwurm, 1971). There have also been attempts to define or delimit sub-zones within this area. Once again a considerable amount of confusion has been generated, with terms such as 'rurban fringe' and 'the rural-urban fringe'; 'the limited fringe' and

'the extended fringe'; the 'suburban fringe zone' and the 'outlying adjacent zone' and 'inner' and 'outer' fringe areas, appearing throughout the literature (Pryor, 1968). It is, therefore, difficult to make valid comparisons between studies as the meaning attributed to each term may vary considerably from study to study and are not often clearly defined.

One of the clearest conceptual frameworks for describing this ill-defined outermost zone of the North American City was presented by Russwurm in 1971. He envisages four sub-zones: the suburban zone, the urban fringe, the urban shadow, and the commuting zone. These zones are illustrated schematically in Figure 1.1.

The suburban zone describes the continuous built-up area of the city and as such is not part of the zone of transition. It is spatially important, however, as it forms the inner margin of the transition zone. It is also a dynamic boundary, constantly moving outward from the central city; consequently, it is not likely to coincide directly with any political boundary (Russwurm, 1971).

The commuting zone represents the entire area from which people will travel to and from the city on a daily basis. This zone overlaps both the urban fringe and the urban shadow and extends for approximately 50 miles or more - equivalent to approximately one hour's travel time for most people (Russwurm, 1971).

The urban fringe zone is adjacent to the suburban zone. Characteristically, it is semi-urban in terms of population density, the rural nonfarm population being greater than the rural farm population. This

is the area in which the most active conversion from rural to urban land uses takes place. It is in this zone that the residential subdivisions, commercial, industrial, and other space extensive urban land uses invade the rural countryside (Russwurm, 1971). Throughout the literature this term is often used interchangeably with the phrase "rural-urban fringe."

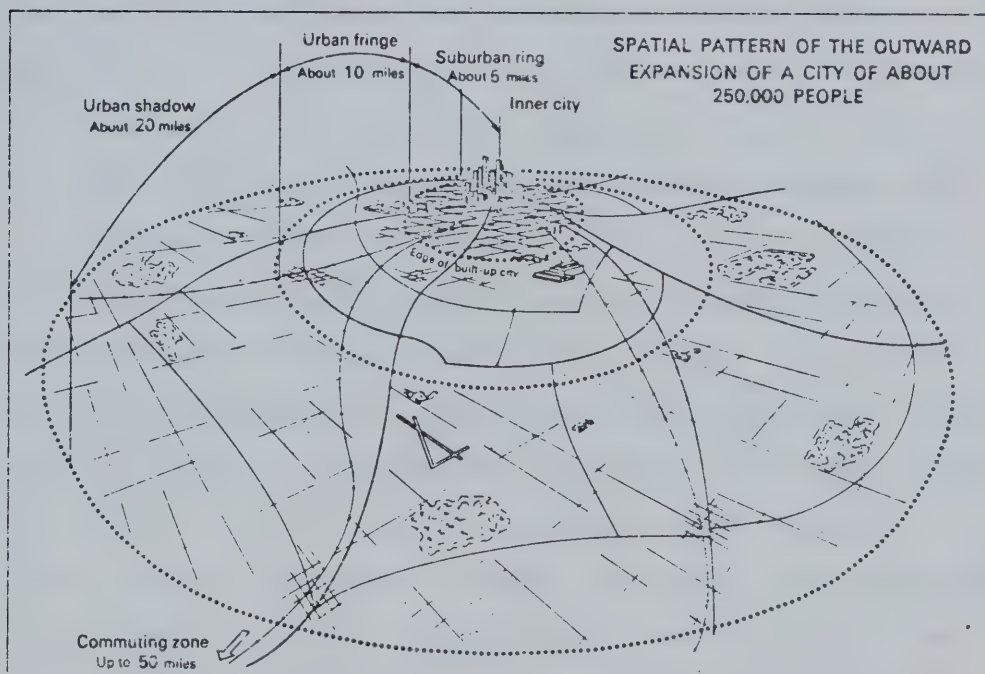


Figure 1.1: The Spatial Pattern of the Outward Expansion of a City: Population 250,000.

Source: Russwurm, L. H. "Urban Fringe and Urban Shadow" in Urban Problems: A Canadian Reader. Krueger, R. R. and BryFogle, R. D. eds. Toronto: Holt, Rinehart and Winston, 1971, p.107.

The urban shadow is the zone with the first noticeable evidence of the transition of rural land to urban use. Characteristically, it is an "area of surrounding farmland which, because of the influence of the city, is to all intents and purposes sterilized for agricultural purposes; or subject to pressures pushing it out of agricultural production" (Gertler and Hind-Smith, 1961, p.157). Here, phenomena such as the nonfarm ownership of farmland, and the subdivision of rural land into low density large lot residential development can be found. The urban shadow is predominately semi-rural as agricultural land uses are dominant. In the urban fringe, urban land uses are visually dominant; in the urban shadow the rural to urban transition is much more subtle and is often visible only to the experienced observer (Russwurm, 1971).

One other term that is often used in conjunction with discussions on the urban fringe, is urban sprawl. This term conveys at least three different conceptual meanings (Russwurm, 1971, p.105). First, sprawl can refer to the continually outward spread of urban development, radiating from the downtown core through the urban fringe to the urban shadow. In this sense it conveys a meaning of process. Second, the term is popularly applied to the orderly appearing, continuous, low density form of single family residential subdivision that is characteristic of suburban development. Although often criticized as being wasteful and uneconomic in terms of land use, the continuous apparently endless succession of apparently identical suburbs creates an image of neat and unvarying order. Thus, in this sense, sprawl conjures an image of order. The third and contradictory meaning refers to the disorderly, haphazard,

and discontinuous mixture of land uses characteristically prevalent in the urban fringe zone (Russwurm, 1971). This is the sense in which the term is not commonly used by planners and urban specialists. Urban sprawl, then, can convey a notion of process, order, or disorder, depending upon the context of its usage. It is a term which must be used with the utmost of caution (Coleman, 1966; Russwurm, 1971).

Empirically, both the urban fringe and the urban shadow have been delimited largely on the basis of census population data. Several methods have been used with varying degrees of success. Among these are:

- (1) The number or proportion of nonfarm households in an area in relation to the total number of households (Rodhaver, 1947; Russwurm, 1971).
- (2) The density of nonfarm households (total nonfarm) per square mile (Myers and Beegle, 1947).
- (3) The assessed value of nonfarm land as a proportion of total assessed value (Hind-Smith, 1962).
- (4) The nonfarm ownership of farmland, i.e. land owned by other than a farmer or other rural user of land (Gertler and Hind-Smith, 1962; Russwurm, 1961).
- (5) The existence of undeveloped residential subdivisions (Gertler and Hind-Smith, 1962).
- (6) The amount of farmland for sale for urban purposes (Gertler and Hind-Smith, 1962).

- (7) The proportion of the population whose occupation is listed in a nonfarm classification.
- (8) The proportion of the resident population commuting to and from the city on a daily basis.
- (9) Intensive land use surveys which attempt to identify all nonrural land uses.
- (10) The loss of farmland per 1000 increase in population (Crerar, 1962; Bogue, 1956).

These methods are seldom used in isolation. Rather, most researchers utilize two or more of them in any one study. The majority of these methods rely heavily on the federal census for data. Unfortunately, deficiencies exist in census materials which effect severe constraints on their usefulness for research purposes.

One of the major drawbacks to the use of census data is that the areal base required for research purposes is often smaller than that provided by census sources. In particular, census metropolitan areas tend to take in too large an area for rural-urban transitions to be measured effectively. This is evident when the major criteria used to delineate the C.M.A.'s for the 1971 Canadian census are examined.

These are as follows (Ricour-Singh, 1972):

- (1) an area of 100,000 or more population.
- (2) the inclusion of whole municipalities.
- (3) the inclusion of the main labour market - the area which includes at least 75 percent of daily commuters; operationally

based on a 20 mile radius from the edge of the built-up area.

- (4) the area in which the proportion of the labour force engaged in primary activities, excluding mining, is less than the national average.

Generally speaking, census data permit only gross delineations to be made of the extent to which urban land uses and activities have encroached into rural areas in the vicinity of large cities. Census definitions are periodically revised; this, along with changes in the areal base of C.M.A.'s, makes time series comparisons difficult and in many cases impossible (Crerar, 1962).

Factors Leading to Fringe Development

Cities in both Canada and the United States characteristically have well developed urban fringe and urban shadow zones. There are five major factors responsible for this:

- (1) The consistent, rapid growth of the population of large urban centres.
- (2) Technological advancements that have given large portions of the population access to high levels of relatively inexpensive transportation and communication (Wehrwein, 1942).
- (3) The almost unrestricted competition for land that is prevalent in our society (Jackson, 1973).
- (4) Society's general acceptance of the following individual rights: lifestyle preferences, space and territory, property

rights accessibility and services (Donaldson, 1969; Gaffney, 1970; Wibberly, 1960; Sargent, 1970; Rodehaver, 1947; Clark, 1961).

- (5) The lack of unitary and consistent planning controls over the built-up city and the rural area surrounding it (Coleman, 1969).

Urban population growth. The addition of large numbers of people to urban areas necessitates the conversion of agricultural and other land into dwelling sites and their related servicing infrastructure. Most housing for this added population occurs on the periphery of the existing built-up area; thus, the inner part of what was the urban fringe becomes the outer edge of the suburban zone.

As population growth occurs, the demand for land in the fringe areas increases dramatically resulting in an increase in land value (Dennis and Fish, 1972). A "distance decay" effect is readily observable with relation to land values as a greater number of people look farther out from the continuously built-up area in search for cheaper land (Clark, 1966; Coleman, 1969). While cheaper land is the attraction, the underlying force which motivates people to "move out" is their desire to own their own homes and to reside in the rural setting (Martin, 1953; Clark, 1966). One common consideration concerning the move to fringe areas relates to the sudden increases to housing shortages in the central city. This has been disregarded on the basis that the movement was an old concept that had developed long before any current dwelling

scarcity existed. Factors such as "freedom", security", a "desire for community life", a "desire to escape from human concentration", and "giving the children a chance to grow up in the country" appear to be more important considerations for the moves (Arensburg and Kimball, 1965). Another reason in a similar vein was investigated by Rodehaver; the return to rural living of a farmer rural population that could not adjust well to life in densely populated urban centres (Rodehaver, 1947).

Whatever the reason, the general process or sequence of development has been one of scattered houses, then small subdivisions in scenic areas, then larger subdivisions on flat well-drained agricultural land adjacent to the built-up area (Clark, 1961; Isberg, 1972).

Advances in transportation technology. One of the pioneer urban fringe studies by Wehrwein in 1942 attributed the ease of movement brought about by the automobile as one of the root causes of fringe development (Wehrwein, 1942). A report on the urban fringe of Vancouver emphasized the significance of the automobile and the desire for home ownership as two of the most significant factors which have fostered extensive fringe development. It was also determined that increases in personal leisure time have resulted in fringe residents placing 'a considerable emphasis on accessibility to outdoor recreational facilities in selecting a location for their residence. The study went so far as to say, "places with recreational amenities challenge the place of employment as a major determinant of residential location" (Lower Mainland Regional Planning Board, 1963).

There are very few cities in Canada in which the centre cannot be reached in approximately 45 minutes travel time from a distance of 30 miles out. In fact, the development of employment and shopping nodes on the periphery of large cities has made these facilities as or even more accessible to fringe dwellers than to the population of the inner city.

Competition for land. There is considerable literature concerned with the development of models which portray the outward expansion of cities. Generally, a wave form is used which assumes the spread of urban land use activities in an outward direction from the city centre. Friction of distance notions are used which reflect the dynamic equilibrium between centripetal and centrifugal forces (Korcelli, 1970; Blumenfeld, 1954; Boyce, 1966).

These models reflect market competition for land based on declining values per unit area outward from the inner city. Many models make the assumption that urban land uses are the highest and best uses in economic terms and that agricultural and other rural land uses cannot compete. Kruger (1971) has suggested that in urban development the economics of location have been the prime considerations resulting in urban fringes. In these instances urban land uses are always dominant. He suggests that by developing appropriate monetary values, the value of agricultural land for other uses could be derived which could compete with the urban values for land.

Land speculation, a regularly identified factor in urban fringe development, is also a result of the competition for land. Some

economists tend to provide arguments based on the factors of supply and demand which portray useful or at least neutral roles for land speculation.

Neutze views land speculation as using land in ways that bring less than the highest current returns in the hope that future returns will more than compensate for the loss. Whenever expected returns from a future use are of significant value over a current use, speculation should occur; hence, the urban fringe and shadow zones are highly attractive for speculative purposes. Here, the future returns for an urban use are very much greater than are those for agricultural and other rural uses.

The factor of uncertainty is critical in any discussion of land speculation. Neutze (1968, p.112) points out that:

Uncertainty always results in the misallocation of resources. Too much land will be held out of current development here, and too little there, producing vacant lots and scattered development. As long as there is uncertainty, and as long as the timing and coordination of urban development is carried out in the private market it does not make sense to decry the role of land speculators.

Land speculation is an intrinsic part of the competition for land in the urban fringe and shadow and a considerable disagreement exists on its merits or demerits (Clawson, 1970; Gaffney, 1970; Spurr, 1971; Dennis and Fish, 1972). Regardless of the desirability of land speculation for the optional timing of the conversion of rural land to urban uses, its effect on rural land values should be considered. A number of studies have been conducted in recent years which attempt to establish

linkages between land speculation and high real estate prices (Manvel, 1968; Dennis and Fish, 1972; Clawson, 1971). Essentially, these studies have indicated that the activities of land speculators have resulted in inflated prices in rural areas resulting in higher development costs and in some cases, the loss of productive agricultural land. Some of the problems associated with the competition for agricultural lands in urban fringe areas are discussed by Crerar (1962) and Gertler and Hind-Smith (1961).

Individual rights. In urban fringe areas problems concerning such things as environmental degradation, increased traffic flows and so on are becoming increasingly evident. These are collective phenomena, the unintended by-product of many individual decisions (Friedman, 1973). As long as a number of individual rights are insisted upon, urban fringe zones will occur.

The most notable expression of individual rights in the urban fringe and shadow is the marked preferences shown by Canadians for individual houses. Over time, individual phenomena become collective phenomena and such undesirable side effects as polluted water tables, congested roadways, high property taxes, overloaded school systems, and private control over prime recreational lands may result.

Planning studies of "exurban" residential development around several of Canada's major urban centres focus on many of these social, economic, and environmental problems (Calgary Regional Planning Commission, 1968; Alberta Department of Municipal Affairs, 1974; Lower Mainland Regional Planning Board, 1963; Paterson Planning and Research

Ltd., 1971) which have resulted from large population increases of an urban nature in a rural area. Four categories of individual rights can be identified which foster urban fringe development; these are the right of an individual to hold property, preferential lifestyles, space territory feelings, and the right to a high level of accessibility and services.

Despite constraints applied to limit or control certain land uses in fringe areas the individual property owners still has the 'right' to enjoy and exploit any income-producing capability the land may have. This point is brought forth very clearly in the following quotation from Wibberly (1960, p.12):

Without any form of land control or planning, the use to which a piece of land is put, is finally decided by the price which is offered for it. In this circumstance, the use or interest which needs land in large amounts because it uses it extensively is bound to lose in the competition for land with other interests.

The quotation makes it clear that without strong public control over land use, such as the notion of an urban fence suggested by Coleman (1969), urban fringe development will occur since there will always be a demand for fringe properties for a wide variety of residential, commercial, industrial, institutional, and recreational uses. Quite often the greatest opposition to land use controls is voiced from farmers and other land owners in the urban fringe and shadow zones who object strenuously to having their individual property rights (presumably their right to sell land for nonagricultural interests) infringed upon by restrictive legislation.

A number of studies have concluded that the lifestyle desired by exurban residents and those wishing to reside in fringe areas is that which goes with a detached single family dwelling on a fairly large plot of land isolated from neighbours, but serviced by good roads and a high quality of public services (Martin, 1953; Sargent, 1970). Many people prefer to live in the country. Their right to do so up to some density which is damaging to the rural environment appears to be widely accepted. Service and cost restraints may be restrictive, but the basic right to some scattered or clustered development in the fringe or shadow area has not as yet been denied.

Central to this are the 'agrarian myth' or 'arcadian ideal', romantic perceptions of country life which have pervaded Britain and North America for centuries (Creese, 1966; Darley, 1975; Donaldson, 1969). The 'agrarian myth' expounded by Thomas Jefferson idealizes the 'virtuous and healthy yeoman farmer, at once individualistic and altruistic at one with nature and with his fellow man' (Donaldson, 1969, p.18). The 'arcadian ideal' grew out of the crowded unhealthy British cities of the industrial revolution. A life in the country where man could be in harmony with nature was visualized as being a 'cure-all' for the social evils of the industrial cities. These ideals were manifested in the 'Garden City movement' of Ebenezer Howard and William Morris, and later in the works of Frank Lloyd Wright and many others (Creese, 1966; Donaldson, 1969). The 'agrarian ideal' was also very strong in North America in the early 20th century. McMahon (1917) wrote:

Urbanites should divorce their city jobs and residences to form a more perfect union ... My argument that all city folk who can should marry nature and settle down with her You don't have to be rich to escape suburban wedlock, all that is needed is a snug little home in the nearby country and a piece of ground large enough to grow eggs, fruits, and vegetables.

This sentiment is still very strong and is one of the major causal factors of exurban development.

Another individual right manifest in the fringe and shadow zones is the desire to have control over one's own space and territory. Many of the studies written on exurban development report that the majority of persons residing in fringe areas consistently rate privacy, open space, and peace and quiet among the most important advantages of country living (Andrews, 1963; Calgary Regional Planning Commission, 1968; Martin, 1953; Paterson Planning and Research Limited, 1973). Thus the pattern of development which tends to occur in the fringe and shadow zones denotes a desire for 'apartness' rather than 'togetherness' (Sargent, 1970).

The romantic ideals of a home in the country where the children can grow up in a "healthy" atmosphere and a desire to get back to nature is very closely related to this. For some people, especially those with rural backgrounds, the city may be looked upon as a type of 'prison' from which to escape (Rodhaver, 1947).

The observation that people move to the country knowing that an urban level of services is not available, but within a relatively short period of time make demands for such services as improved maintenance of roads, regular garbage pick-up, better fire protection, water and

sewage systems, street lighting, and so on recurs continuously throughout the literature (Clark, 1961; Gaffney, 1958; Isberg, 1972). It is evident that fringe dwellers feel that they are entitled to a wide range of urban services while enjoying the natural amenities of rural areas. The acceptance by society at large that all people are entitled to some common level of services regardless of their location helps to insure the development of fringe and shadow zones. It is this aspect of fringe development that often causes poor relationships to develop between the farm and nonfarm populations of fringe areas.

Generally, public services are financed through property taxation. Due to the structure of the tax base, the exurbanite generally receives more than he pays for, while the farmer pays for more than he actually receives. Within the built-up city, commercial and industrial assessment makes up the difference between the costs and revenues produced through residential property taxation. In the country there is often no industrial base, consequently, the farmer's assessment is increased to make up the difference. This problem is not recent in origin and is well documented in the literature (Krueger, 1957; Lower Regional Mainland Planning Board, 1963). High property taxation has been identified as one of the major characteristics of the urban fringe and shadow and has been a major contributor to the loss of agricultural land in the vicinity of large metropolitan centres (Gertler and Hind-Smith, 1961).

The equity of costs and services is an urban fringe problem usually associated with noncontiguous low density development. In

many cases, recent migrants to fringe areas expect a level of services resembling that of densely built-up areas. However, economic and equitable provision of these requires a compact, continuous form of development, not the scattered development of extremely low density prevalent in the fringe. The major reason for this is that physical service costs are proportional to length. In urban fringe areas the costs of specific services may be two to three times as high per household as they are for more compact development (Alberta Department of Municipal Affairs, 1974; Lower Mainland Regional Planning Board, 1963; Calgary Regional Planning Commission, 1968). The costs of providing these services are usually born by the total population of a political jurisdiction, thereby creating the situation in which some residents are subsidizing uneconomical services to others. Historically these costs have been born by the farm population; however, in some cases, local authorities have increased taxes on exurban residences to avoid pressure on farmers to the extent that they are paying tax bills as high or higher than in the city with fewer services.

In the Edmonton area, farmland is assessed at a fixed value per acre, the maximum value of which is \$40.00 per acre. Furthermore, farm residences are exempt from assessment and taxation. This has led to the situation that increased municipal costs are passed on exurban population whose property is assessed in accordance with its market value. Recent studies in the Edmonton and Calgary area have shown that increased tax revenues derived from the country residential population have more than compensated for increased municipal costs. The Edmonton experience has been that country

residential subdivisions are extremely costly during the early states of development; however, once developed the revenue gained more than compensates the costs incurred, to the extent that in some cases the country residential population subsidizes the farm population.

Institutions. The lack of unitary and consistent planning controls is a major factor in the development of urban fringe zones and their associated problems. In general the case has been that the institutional means necessary to lessen the development of urban fringe zones have either not existed or have not been seriously applied. The controls which exist in the Edmonton area will be discussed at length in Chapter 4. At this point it will suffice to say that without unitary and consistent controls the causal factors noted earlier are free to make their full impact on the urban fringe and urban shadow zones.

Characteristics of Fringe Dwellers

The impact of a sudden influx of urbanites into rural communities was given considerable attention in the United States by a number of sociologists in the 1950s. Social scientists conducted numerous studies in attempts to show that sociologically, the fringe area was a separate entity distinct from either the urban or rural communities (Myers and Beegle, 1947; Andrews, 1963; Martin, 1953; Kurtz and Eicher, 1958; Beegle and Schroeder, 1955). These studies were largely inconclusive as no typical 'exurbanite' was found to exist. However, some socio-demographic characteristics were identified which are common to most fringe areas.

The following characteristics were identified by Arensburg and Kimball (1965, 1968):

1. Fringe areas are comprised mainly of family units. The number of single person households is disproportionately small.
2. Fringe families are characteristically young, with small children.
3. Home ownership is a prime consideration in fringe development as the overwhelming majority of dwellings are owner occupied.

Similar observations were made in studies conducted in the greater Vancouver area. Characteristically, fringe residents were strongly family based consisting of primarily young families with children. Whereas a survey conducted in the environs of Toronto identified fringe dwellers as middle to upper income, with a relatively high level of formal education for all adult family members. More than 50 percent of the labour force was found to be in professional and managerial categories, the median number of children per families was two, and 100 percent of the residents owned their own homes. Similar findings are described in studies of Winnipeg, Calgary, and many American cities, with only slight regional differences. It is evident that the population characteristics of fringe dwellers tend to be remarkably similar with only slight variations being evident between different cities and geographic regions.

Factors Motivating Moves to the Fringe

To date, very little research has been done to determine the factors which motivate people to move out of the city and into the rural areas of the fringe and shadow zones; however, the concept of 'place utility' developed by Wolpert (1965) which essentially measures an individual's level of satisfaction or dissatisfaction with respect to a given location can be used as a framework for such an investigation.

Geographers have traditionally recognized two sets of attributes applicable to any location: those related to the physical characteristics of the 'site', and those which are related to the accessibility characteristics of 'situation.' The concept of place utility can thus be regarded as a composite of 'site' utility and 'situation' utility (Brown and Moore, 1970). If the 'place utility' of a present site diverges sufficiently from the resident's immediate needs, he will consider seeking a new location which satisfies them. The resulting search for and evaluation of dwelling opportunities then takes place within what is defined as the:

confines of the individual's action-space - a subset of all locations within the urban area comprising those locations for which the intended migrant possesses sufficient information to assign place utilities (Brown and Moore, 1970).

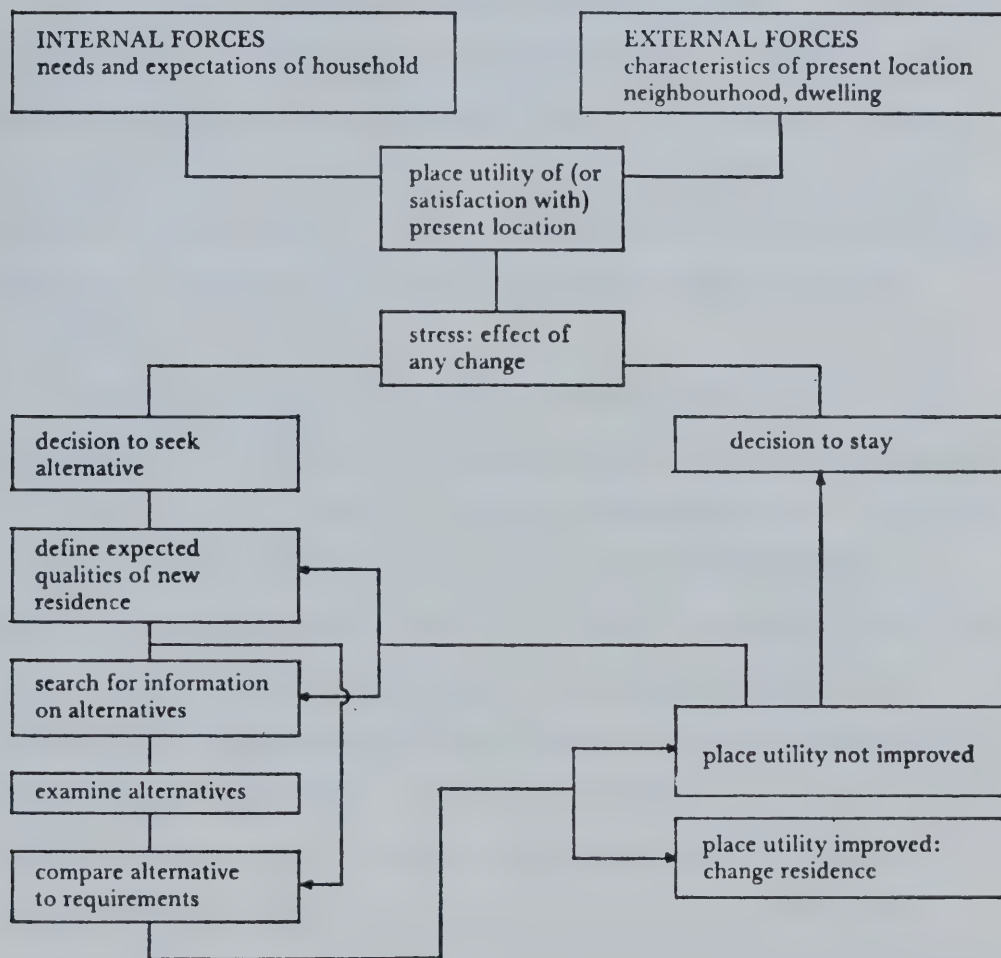
Viewed in this manner, migration is a process of adjustment whereby one place of residence is substituted for another in order to better satisfy the needs and desires of the migrant.

Using these two concepts, Brown and Moore developed a model of the residential location process which serves to provide a useful framework for a discussion of residential mobility. The model (Figure 1.2) emphasises the need to understand the decision-making process of the individual household and the search procedure through which an actual choice is made.

In the model it is assumed that the members of a household and the activities they perform constitute a simple behavioural system. The environment in which the household is situated provides a continuous source of stimuli to which the household responds. Certain of these

Figure 1.2

A Model of the Residential
Location Decision Process



Source: L. A. Brown and E. G. Moore, *The Intra-Urban Migration Process A Perspective* - 1970 in L. S. Bourne: *Internal Structure of the City*, (Oxford University Press, Toronto, 1971, p. 247).

constitutes 'stressors' and are perceived as either disrupting or threatening to disrupt the established and desired patterns of the household's behavior (Brown and Moore, 1970).

For any given household the stress associated with a given situation may be reduced to or maintained at tolerable limits by adjusting its needs; restructuring the environment relative to the household so that it better satisfies the household's needs; or relocating the household (Brown and Moore, 1970). A study addressing itself to exurban population movement is concerned with households that have chosen the last alternative.

Sources of stress. The process of family formation, growth, and dissolution has proven to be an important factor in a family's decision to relocate. When the family life-cycle from formulation to dissolution is examined, seven critical stages can be identified which have an impact on its propensity to move (Glick, 1971). Normally, these stages include family formation; pre-child, during which the family is a constant size; child-bearing, during which the family increases in size; child-rearing, during which the family is a constant size; child-launching, during which the family decreases in size; post-child, during which the family is constant in size; and family dissolution. For 'typical' families, mobility is greatest during the stages of family formation, child-bearing, and child-launching (Rogers, 1964).

The decision to relocate depends upon several factors such as the size and adaptability of the present housing unit, the tenure status of the family, the way in which changes in the family structure are evaluated and related to housing needs and the availability of

housing within the range of the household's financial resources. The importance of lifecycle changes in activating mobility is influenced by family norms. Bell (1959) proposed that "familism" is an important factor in influencing family mobility. Bell defines "familism" as high valuation on family living; marriage at young ages; a short childless time-span after marriage, and 'child centredness.' This implies that the child bearing stage of the life-cycle occurs earlier and lasts longer in familistically oriented households and that they are more likely to move from residential locations perceived as unfavorable to family living and child welfare than those households that are not. Other factors such as kinship ties and a desire to live near friends and relatives have also been proven to influence a family to relocate.

Residential mobility is often the spatial expression of vertical social mobility. As families rise in social class position, they often change their residence to accord with their class destination (Rossi, 1955). Leslie and Richardson (1961) found that an association exists between social mobility expectations and residential mobility intentions. This led them to conclude that both the need for more living space as the family increases its size and the need to adjust housing to changes social status are important forces in motivating a family to move.

The physical and social changes that take place in a residential area over time increases the propensity of a family to move. Changes in neighbourhood character related to the urban housing cycle and shifts from single family land use to multiple family, commercial or

other intensive uses are often negatively perceived by the residents of the areas and serve as stress factors which may motivate them to relocate.

Changes in the demographic and social composition of neighbourhoods may also generate changes of residence. Residential replacement associated with the urban housing cycle may result in the social status of the residential area being downgraded or in alterations in the area's ethnic composition (Rossi, 1955). Reactions of current residents to these changes depends both upon their views of their new neighbours and their own self-perceptions. Prejudice and threats to self-image may impel some families to move from neighbourhoods experiencing such change.

Residential needs and aspirations comprise one other major determinant of residential change. Family members often have definite ideas as to what an 'ideal' home for them is. Housing unit expectations may pertain to privacy, type of tenure, style, and other features. Site aspirations may include locational as well as social and physical amenities. If the current dwelling and residential location has not met the expectations of the family, sufficient dissatisfaction could be generated to motivate the family to relocate. Constraints on family interaction imposed by an unfavorably perceived housing environment may provide a further impetus to moving (Rossi, 1955).

The Search Procedure

Once the decision to move is made, many factors are influential in determining the location of the new area of residence. In any given search an individual household focuses on only a small subset of factors

which are critical in its own context. This restriction stems from the inability of any single household to evaluate choices based on too many variables or attributes (Brown and Moore, 1971).

Sources of Information

The search behavior of an intended migrant household consists of the utilization of and reaction to a variety of sources or channels of information. In a given search situation, three critical elements may be identified (Brown and Moore, 1971):

- (1) the sources of information available to the searcher;
- (2) the information concerning possible sites possessed by the searcher;
- (3) the manner in which the searcher utilizes the information available to him and that which he already possesses.

SUMMARY

The review of the literature has revealed that exurban residential development has been the topic of considerable research in Britain and North America. A characteristic form of urban expansion 'outward' from the central city is well documented.

The information compiled from the literature will be utilized to form the conceptual framework upon which the study is organized and the research instruments designed. The research objectives presented in Chapter 2 have been structured in accordance with this. The study is organized into two sections. The first section of the study is concerned with identifying the form of growth which has occurred in

the Edmonton area. The second section is concerned with identifying the characteristics of the country residential population and the factors which have created the demand for an exurban lifestyle.

The unique findings of the study will be of value to local municipal authorities and planning agencies. An attempt will be made in Chapter 6 to relate these to the general findings inherent in the literature review. In this sense, the case study will serve to either substantiate or refute the general expectations of exurban residential development gained from the literature.

Chapter 2

OBJECTIVES, DATA SOURCES, METHODOLOGY

In accordance with the stated goals, this study is organized into two major sections. The first is concerned with identifying institutional, economic, and physical factors which have influenced the spatial distribution and rate of land subdivision and development for country residential purposes in the Edmonton area. The second section is concerned with isolating factors which lead to a demand for country residences. The two sections are not mutually exclusive; many interrelationships exist which will be presented in the conclusion.

SECTION ONE: OBJECTIVES

- (1) To delineate the areal extent of country residential subdivision; in terms of the number, size, and location of parcels.
- (2) To identify any areal differentiation in the rate at which country residential subdivisions are developed and to isolate factors which influence this differentiation.
- (3) To determine the influence that existing institutional land use regulations and their implementation have had on the distribution of country residential subdivisions.
- (4) To determine what environmental factors are important in influencing the distribution of country residential subdivisions.

SECTION TWO: OBJECTIVES

- (1) To determine the demographic and socio-economic characteristics of the country residential population.
- (2) To determine if this population differs significantly from:
 - (a) the population of the City of Edmonton.
 - (b) the population of smaller urban centres in the metropolitan area.
 - (c) the rural farm population of the study area.
- (3) To isolate factors which are important in motivating a household to move from its former residence and relocate in a rural setting.
- (4) To determine the 'search' procedure utilized by the population in relocating to a country residence.
- (5) To determine what social, economic, and environmental factors are considered important in the selection of a suitable country residential site.

DELINEATION OF THE STUDY AREA

Inner Limit

For the purpose of this study, the 'inner limit' of the study area was set to correspond as closely as possible to the extreme edge of Edmonton's continuously built-up suburban zone. In recent years, the city's political territory has expanded outward into the adjacent rural municipalities at a rapid rate as several large scale annexations have taken place (see Figure 2.1). As this expansion has occurred, several

country residential subdivisions originally located well outside the city limits have become incorporated into the political jurisdiction of Edmonton. In some cases, they have experienced complete redevelopment to 'lot' sized urban subdivisions. In other cases, the city has simply been built around them. To avoid difficulties in identifying and acquiring sufficient data, only those subdivisions located outside the boundary were included in the study.

The Outer Limit

For the purpose of this study, the 'outer limit' of the study area was set as the extreme limit to which the subdivision of land for country residential and related purposes had occurred prior to and including the year 1972.

Data Sources. The sources of data used in determining the 'outer limit' of the study area were:

- (1) A series of six maps representing parts of the Edmonton region derived from the 1:50,000 National Topographic Series. These have been compiled by the Edmonton Regional Planning Commission and depict all subdivided parcels of land by plan of subdivision registered at a Land Titles Office.
- (2) Applications for subdivision, which include the legal description of the land, the date of the application, the existing specific use of the land, the proposed use of the land, the gross area of the parcels to be created, and the number of parcels to be created. An example of the form used when applying for a subdivision by plan (the most common

method of subdivision) is presented in Figure 2.2. Copies of these forms are retained by both the local municipal authority and the Regional Planning Commission when an application to subdivide is made. Unfortunately, in many cases, the forms are not accurately completed.

- (3) Registered plans of subdivision: When an application for subdivision is made, the application must be accompanied by a plan of subdivision drawn to a minimum scale of 200 feet to 1 inch. These plans are required to show (Alberta Regulation 215/67, The Subdivision and Transfer Regulation 4(3)):
- (a) the location, dimension and boundaries of the existing parcels of land to be subdivided.
 - (b) the portions thereof that the applicant proposes to register in a Land Titles Office upon approval of the subdivision.
 - (c) the location and proposed dimensions of all parcels, reserves, and public roadways.
 - (d) the location, dimensions and number, name or other designation of any subdivision, parcel, highway, public roadway, right-of-way, and easement of record in a Land Titles Office which exists on or in the vicinity of the land to be subdivided.
 - (e) the locations and dimensions of all existing services, buildings or structures on the land to be subdivided.
 - (f) contours at intervals of not less than 5 feet.

When an application is approved, the plan is registered at a Land Titles Office. The existing certificate of title for the property is cancelled and new titles are issued in accordance with the blocks and lots shown on the plan of survey. The

Figure 2.1

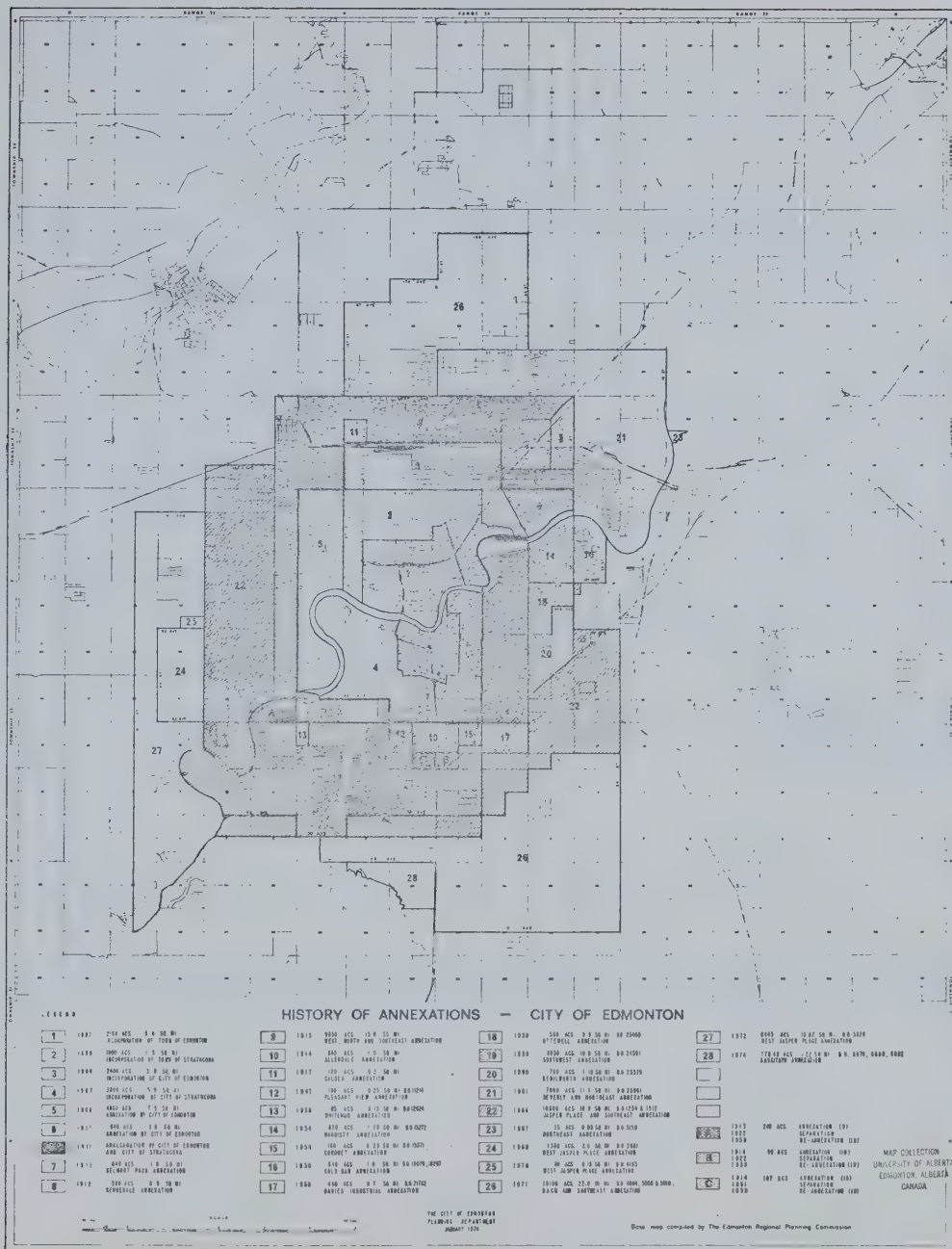


Figure 2.2

GOVERNMENT OF THE PROVINCE OF ALBERTA APPLICATION for approval of a proposed subdivision BY PLAN as required by the Subdivision and Transfer Regulation		DATE _____ FILE No _____ FEES _____
*NOTE: AN INITIAL FEE OF \$10.00 SHALL ACCOMPANY THIS APPLICATION.		

THIS SECTION TO BE COMPLETED IN FULL BY APPLICANT & SURVEYOR				
LOCATION AND GENERAL DESCRIPTION OF LAND				MUNICIPALITY & ADJOINING MUNICIPALITY IF ANY
All/Part Of The	1/4 Of Section	Township	Range	
Being all/part of/Parcel		Block	Registered Plan No. or Certificate of Title No.	
SOIL	SLOPE OF SITE	IS THE SITE	UTILITIES	
Sand <input type="checkbox"/>	0 - 5 % <input type="checkbox"/>	ADEQUATELY <input type="checkbox"/>	Existing Proposed	
Loam <input type="checkbox"/>	5 - 10 % <input type="checkbox"/>	DRAINED ? <input type="checkbox"/>	Water <input type="checkbox"/>	Telephone <input type="checkbox"/>
Clay <input type="checkbox"/>	10 - 15 % <input type="checkbox"/>	Yes <input type="checkbox"/>	Storm sewer <input type="checkbox"/>	Light & Power <input type="checkbox"/>
Other (specify) _____	15 - 20 % <input type="checkbox"/>	No <input type="checkbox"/>	Sanitary sewer <input type="checkbox"/>	Other (specify) _____
over 20 % <input type="checkbox"/>				
REGISTERED OWNER (OR CERTIFIED REPRESENTATIVE OR AGENT OF OWNER)				WITHIN 1000' OF THE BOUNDARY OF THE RIGHT OF WAY OF CONTROLLED HIGHWAY NO. _____
I HEREBY CERTIFY THAT I AM THE REGISTERED OWNER OF THE LAND DESCRIBED ABOVE OR HAVE BEEN DESIGNATED AS THE REPRESENTATIVE OR AGENT OF THE OWNER ADDRESS _____				ADJOINS LAKE OR RIVER _____
DEVELOPER (IF NOT THE REGISTERED OWNER)				EXISTING SPECIFIC USE _____
I HEREBY CERTIFY THAT THE REGISTERED OWNER OF THE LAND DESCRIBED ABOVE IS AWARE OF THIS APPLICATION ADDRESS _____				PROPOSED SPECIFIC USE _____
FURTHER INFORMATION FURNISHED BY THE APPLICANT				GROSS AREA OF EXISTING PARCEL TO BE SUBDIVIDED _____ ACRES
I CERTIFY that the information given on this form and the tentative plan attached hereto is full and complete and is to the best of my knowledge a true statement of the facts concerning this subdivision. Date _____ Signed _____ A.C.S.				GROSS AREA OF PARCEL(S) TO BE CREATED _____ ACRES
				TOTAL No. OF PARCELS BEING CREATED _____
				DISPOSITION OF RESERVE (S) _____
				RESERVES ARE REQUIRED PURSUANT TO SECTION 18 TO 21 OF THE SUB-DIVISION & TRANSFER REGULATION

THIS SECTION FOR OFFICIAL USE	
DECISION: _____ If not approved, the reasons for this decision are stated in the attached memorandum. Date _____ Signed _____ Provincial Planning Director or Authorised Officer of Approving Authority	1 _____ 2 _____ 3 _____ 4 _____ INSTRUMENT SUBMITTED _____ ENDORSED _____ REGISTRATION DATE _____
NOTE: AN APPEAL FROM THIS DECISION MAY BE MADE TO THE PROVINCIAL PLANNING BOARD PURSUANT TO SECTION 20 OF THE PLANNING ACT AS AMENDED. A WRITTEN STATEMENT OF THE GROUNDS OF APPEAL SHALL BE FILED WITH THE SECRETARY OF THE PROVINCIAL PLANNING BOARD, 8TH FLOOR, 9912 - 107TH STREET, EDMONTON 14, ALBERTA WITHIN 30 DAYS OF THE DATE OF THE DECISION.	

date of registry, recorded on the plan, is important as no lots can be sold under agreement for sale or otherwise until they have been registered (Land Titles Act 1970, Sec. 88(1)). Therefore, the date of registry signifies the earliest date at which country residential development (in terms of occupancy) can legally begin. An example of a typical registered plan of subdivision is presented in Figure 2.3.

Methodology. The first step in determining the outer limit of the study area was an analysis of the maps acquired from the Edmonton Regional Planning Commission. Upon close inspection and field verification checks, it was found that although they provided an excellent source of reference, some of the maps were quite out of date and did not include many of the more recent subdivisions. It was therefore necessary to supplement them with data from other sources.

During the summer of 1973, a detailed survey of all available duplicate copies of registered plans of subdivision, was carried out in the administrative offices of the counties of Strathcona, Parkland, and Leduc, and the Municipal District of Sturgeon. These were used instead of the subdivision application forms because the objective of the exercise was to identify country residential subdivisions which were available for immediate development, not those which may be available at some time in the future. Subdivision application forms as a source of data have several limitations. First, the application may be modified considerably as it passes through the subdivision approval procedure (this will be discussed in Chapter 4) so that the end result may vary

Figure 2.3

COMPILED PLAN

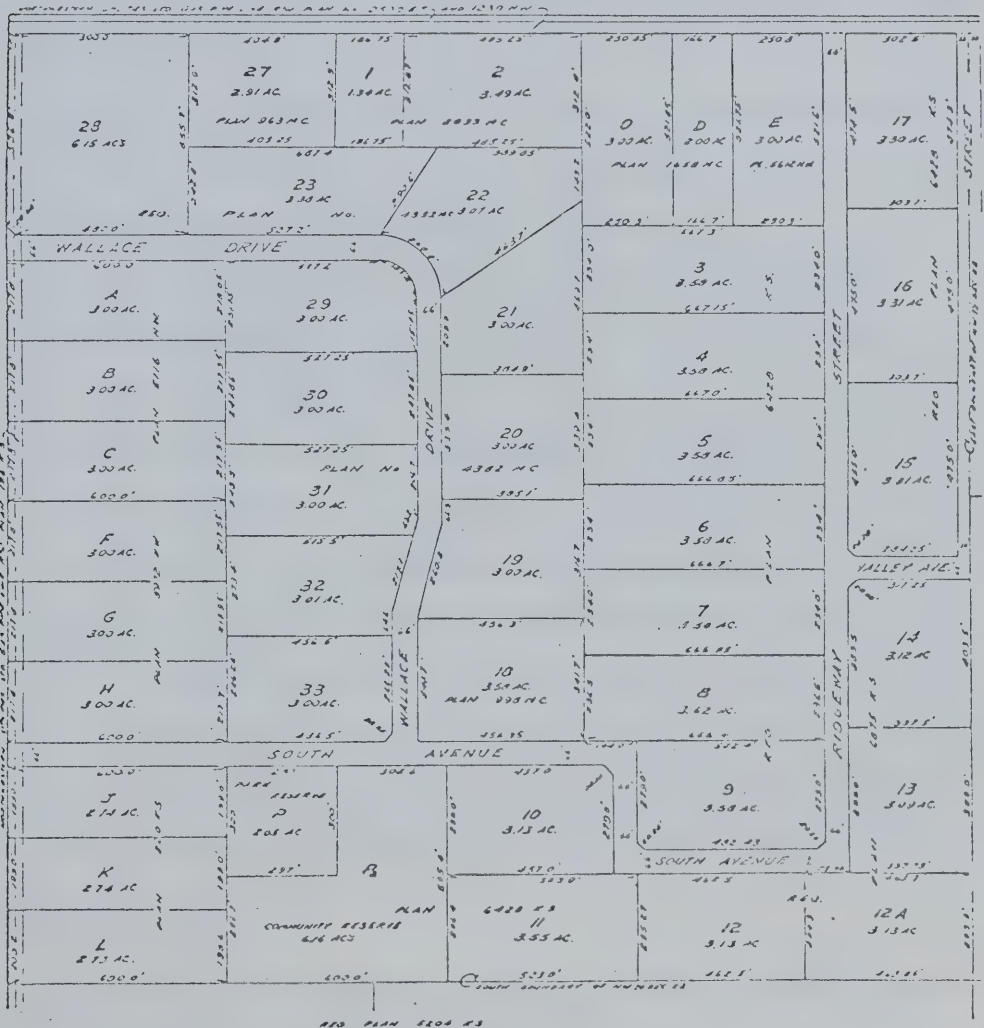
OF NW 1/4 SEC. 22 - TP. 52 - R. 23 - W. 4TH M.

CAMPBELLTOWN HEIGHTS

SCALE: 1 IN. = 700 FT.

1962.

DATE COMPILED: SEPT. 1962

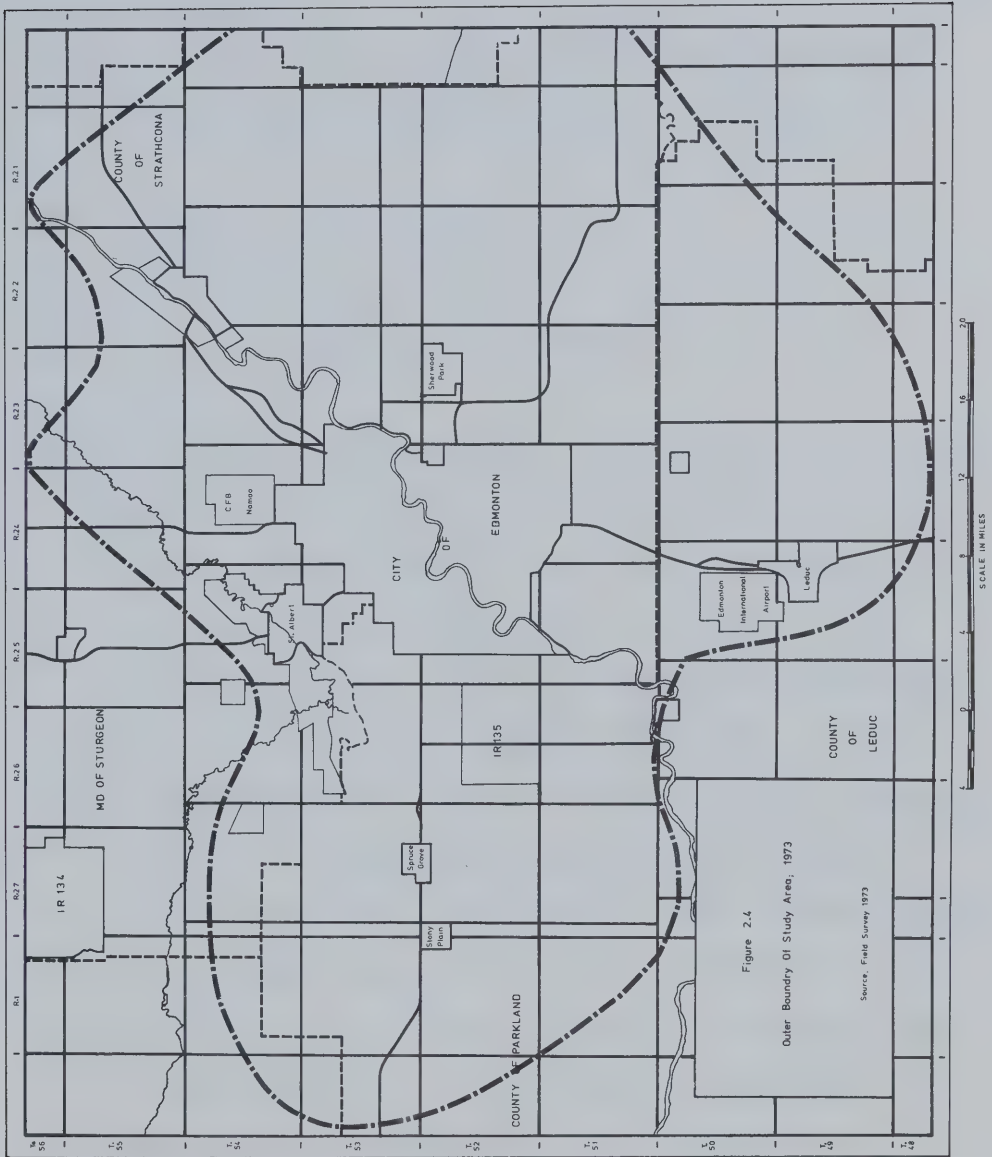
STEWART
EDMOND

considerably from the initial application. Second, not all applications are approved; a fairly large percentage are refused for a variety of reasons. Third, even if an application is approved, the applicant has 18 months in which to register it, during which time the parcels are not available for development. The application forms were consulted when there was some doubt as to the specific purpose of the subdivision. This occurred most often when small acreage subdivisions of less than 3 acres took place in the vicinity of lakes, and some doubt existed as to whether the subdivision was for resort purposes (indicating intermittent occupancy) or country residential purposes (indicating permanent occupancy). In all other cases, registered plans were consulted as the primary data source. The following information was recorded:

- (1) The legal description (quarter section, section, township, range, meridian) of the land subdivided. This was required for mapping purposes.
- (2) The year in which the subdivision was registered.
- (3) The lot number and size in acres of each individual parcel.

To establish the outer boundary, all of the subdivisions in the four municipalities were plotted by quarter section on a base map provided by the Edmonton Regional Planning Commission. A line depicting the extreme outer limit of the subdivision was then constructed (Figure 2.4). It must be emphasized that this line delimits country residential subdivision as it existed in December 1972. There have almost certainly been changes since.

¹Many lots in 'resort' subdivisions in the study area have been converted to country residential uses. These lots were not included in the study because of the lack of adequate data.



SECTION ONE: SUBDIVISION AND DEVELOPMENT

The Rate of Subdivision

The purpose of this section was to determine how the subdivision of land for country residential purposes has varied through time in terms of:

- (1) the number of parcels created.
- (2) the size of parcels (in acres).
- (3) the areal distribution of the parcels.

Data Sources.

- (1) Registered Plans of Subdivision: The information recorded at the time of the 1973 survey - the date of registration, the size of each individual parcel (in acres) and the legal description of the quarter section subdivided - was required for this section. All available plans of subdivision creating parcels of 40 acres or less were included in the study.¹
- (2) Tax Assessment Forms: Assessment forms were used to eliminate parcels of land in the 20 to 40 acre category that were considered to be farms. These forms are kept for each property upon which improvements are taxed. Farm buildings and other improvements are not subject to taxation. In 1973, any area of land containing 20 acres or greater was considered a farm for the purpose of taxation if a sufficient income was derived from agricultural pursuits.

²Some plans approved in 1972 but not registered until early 1973 were included.

Methodology. The inclusion of parcels of land ranging from 20 to 40 acres created a number of definitional problems. Small acreage holdings in this category are generally considered small farms and are regarded as an agricultural rather than country residential land use. However, empirical observation has shown that many of these parcels are used strictly for country residential purposes and that very little income is derived from agriculture. For the purpose of this study, only these parcels could be included, therefore a means of differentiating the residential from the agricultural parcels had to be found.

A survey of all available assessment forms in the municipal authorities in the study area was conducted during the summer of 1973. Only those properties exempt from taxation on improvements were excluded from the study.

Frequency distributions were calculated for the number of parcels created in each size category per year. These were further differentiated by municipality to allow for differences in subdivision policy. The pattern of the distribution was graphically presented in time - series maps. These tables and maps are presented in Chapters 3 and 4.

The Rate of Development

The purpose of this section was to determine how the rate at which the development of country residential parcels has varied through time and to determine factors which influence the rate of development.

Data Sources and Methodology. Frequency distributions were calculated for the number of parcels developed by year in the total study area and each of the four sub-areas. To determine variations between the

rate of development and the size of parcels, cross-tabulations were calculated. This enabled any variation to be determined in the proportion of parcels developed relative to the total number possible.

To determine if any areal differentiations have occurred in the rate of development, maps were constructed which illustrate the percentage of parcels developed in each subdivision. These and tables illustrating the time lag which occurs between the date on which a parcel is registered at the Land Titles Office and the date of development are presented in Chapters 3 and 4.

The Influence of Institutions

When an attempt is made to determine factors which influence the demand for and spatial distribution of a particular land use such as country residential it is essential to have a full understanding of the constraints imposed on it by the various levels of government and their related planning bodies in the form of land use regulations and controls. These can exert considerable influence on the pattern of development. Local planning agencies through the powers invested upon them by higher levels of government may create a pattern of land use considerably different than that which would evolve if only 'market' conditions prevailed.

An investigation of the planning institutions which exist in the Edmonton area was conducted. A summation of this survey is presented in Chapter 4. The following topics are covered as they relate to country residential development:

- (1) Provincial planning legislation.
- (2) Existing planning agencies, their duties, jurisdiction, and policies.
- (3) The implementation of legislation and policies and its effect on the distribution of country residential subdivisions.

The Importance of Environmental Factors

The purpose of this section was to determine what effect, if any, a selected number of environmental, physical factors have had on the distribution of country residential and related land uses. The factors selected for investigation were the availability of potable groundwater; soil capability for agricultural production; land capability for recreation; and land capability for wildlife and waterfowl production.

Sources of Data and Methodology. The primary data source for this section was a series of capability maps prepared for the Canada Land Use Inventory. Through the use of map overlays a subjective measure of the influence of the factors could be determined. This form of analysis is very subjective and is useful only for the identification of trends. The results are presented in Chapter 4.

SECTION TWO: THE DEMAND FOR COUNTRY RESIDENCES

The Country Residential Population

The purpose of this section was to identify socio-economic and demographic characteristics peculiar to the country residential population in terms of:

- (1) family structure.

- (2) family income.
- (3) occupation of the head of household.
- (4) education, head of household.
- (5) the journey to work.
- (6) place of former residence.
- (7) tenure of former residence.
- (8) length of residence, present and past.
- (9) number of moves in recent five year period.

Data Sources and Methodology. The characteristics of the country residential population were derived through a questionnaire survey conducted throughout the study area in the summer of 1973. Data pertaining to the City of Edmonton, smaller urban centres in the study area, and the rural farm population were derived from the 1971 Census of Canada. This information was used primarily for comparison purposes. The census could not be used for the construction of country residential profiles because the data were not differentiated into rural farm and nonfarm categories at the enumeration area level. Furthermore, the data were presented in aggregate form making cross-tabulations between variables impossible.

The population data obtained from the questionnaire enabled comparisons to be effected. By isolating the country residential population from the total rural population comparisons could be made with the City of Edmonton and its surrounding urban and rural areas, thus making it possible to isolate those characteristics peculiar to the exurbanities. The results of these comparisons are presented in Chapter 5.

Factors Motivating the Move to a Country Residence

The purpose of this section was to determine why families relocated their place of residence from an urban to a rural setting. The framework used was essentially a modification of that developed by Brown and Moore in their discussion of residential mobility. An attempt was made to isolate those stress factors which motivated the families included in the questionnaire survey to move to their country residence. The stress factors used in the questionnaire were derived from the literature review and can be grouped into four basic categories:

- (1) familial
- (2) social
- (3) environmental
- (4) economic

In question 7 of the questionnaire (see Appendix) the respondents were asked to list as many reasons as possible in response to the question, "Why did you choose to live in a country residence as opposed to living in the city?" This was done to ensure that any factor inadvertently omitted from the list was not excluded from the study. The list of factors comprised question 8 of the questionnaire. The respondents were asked to rate the importance of each factor in stimulating their decision to move. The ratings were then weighted and the set of factors rated the highest by the total sample was identified. These were then cross-tabulated by the population characteristics in order to ascertain any differentiation between sub-groups of the sample population. The results of this analysis are presented in Chapter 5.

The Search Procedure

An attempt was made to determine the search procedure utilized by the respondents in order to find out if the pattern of developed parcels reflected the sources of information available to potential residents.

Data Sources and Methodology. The sources of data for this section were questions 9 through 13 of the questionnaire. The respondents were initially asked to indicate which sources of information they utilized in their search for a suitable acreage. They were then asked which source they utilized the most; the length of time it took them to find a suitable location; and the number of parcels they looked at before they found it. The results of these questions are presented in Chapter 5 in the form of frequency tables.

Factors Considered in the Selection of a Site

The purpose of this section was to identify the factors which attract the migrant to a specific site. What are families looking for in their search for the site of their new home? The primary reasons for asking this was to determine if the existing supply of country residential parcels reflects the aspirations of potential residents or if it is a result of the perceptions of developers or, possibly, planning agencies.

Data Sources and Methodology. The source of the data for this section was question 14 of the questionnaire which was comprised of a list of social, economic, family, and environmental factors which have been identified in the literature as being major determinants in the selection of residential sites in the urban fringe and shadow zones. The respondents

were requested to rate the importance of each of the factors in their evaluation of the sites they selected. The ratings of the factors were assigned weights and the set considered the most important by the total sample was identified. These factors were then cross-tabulated with the population characteristics in order to ascertain any differentiation between sub-groups of the sample population. The results of this analysis are presented in Chapter 5.

The Questionnaire Survey

The questionnaire was constructed during the summer of 1973. A pilot survey was conducted among a sample of 15 country residents, and the questionnaire was then redesigned in part. A total of 268 questionnaires were then distributed throughout the study area. This represented 15.4 percent of the total number of occupied country residences (1,776) as determined by the survey of tax assessment forms and building permits. One hundred and fifty-one questionnaires were returned in completed form. This was a response of 55 percent and represented 8.5 percent of the population. Only country residences situated on parcels from one to twenty acres were included in the survey.

The sample was stratified according to the age of the subdivision, the number of developed parcels contained in it, and its location. An attempt was made to represent the total study area in direct relation to the number of occupied country residences; consequently, the most concentrated areas of development received the greatest number of questionnaires (Table 2.1).

Table 2.1
Distribution of Questionnaires
by Municipality

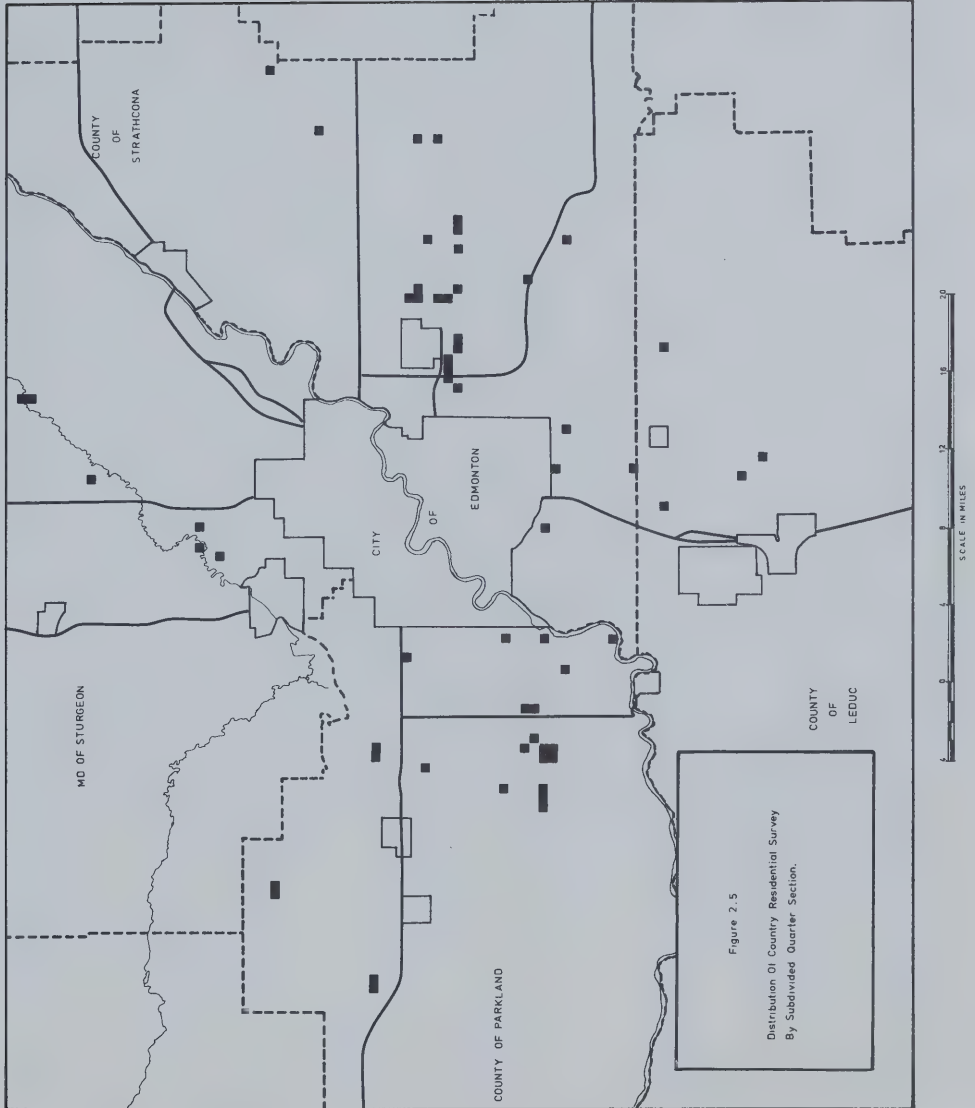
County or M.D.	Total Questionnaires	Percent of Total Sample	Total Returned	Percent Total Sample Returned	Percent Local Sample
County of Strathcona	153	57.08	83	52.5	54.20
County of Parkland	66	24.62	41	25.9	66.12
County of Leduc	21	7.08	13	8.2	61.90
M.D. of Sturgeon	28	10.44	18	11.4	64.80
Total	268	100.00	158	100.0	

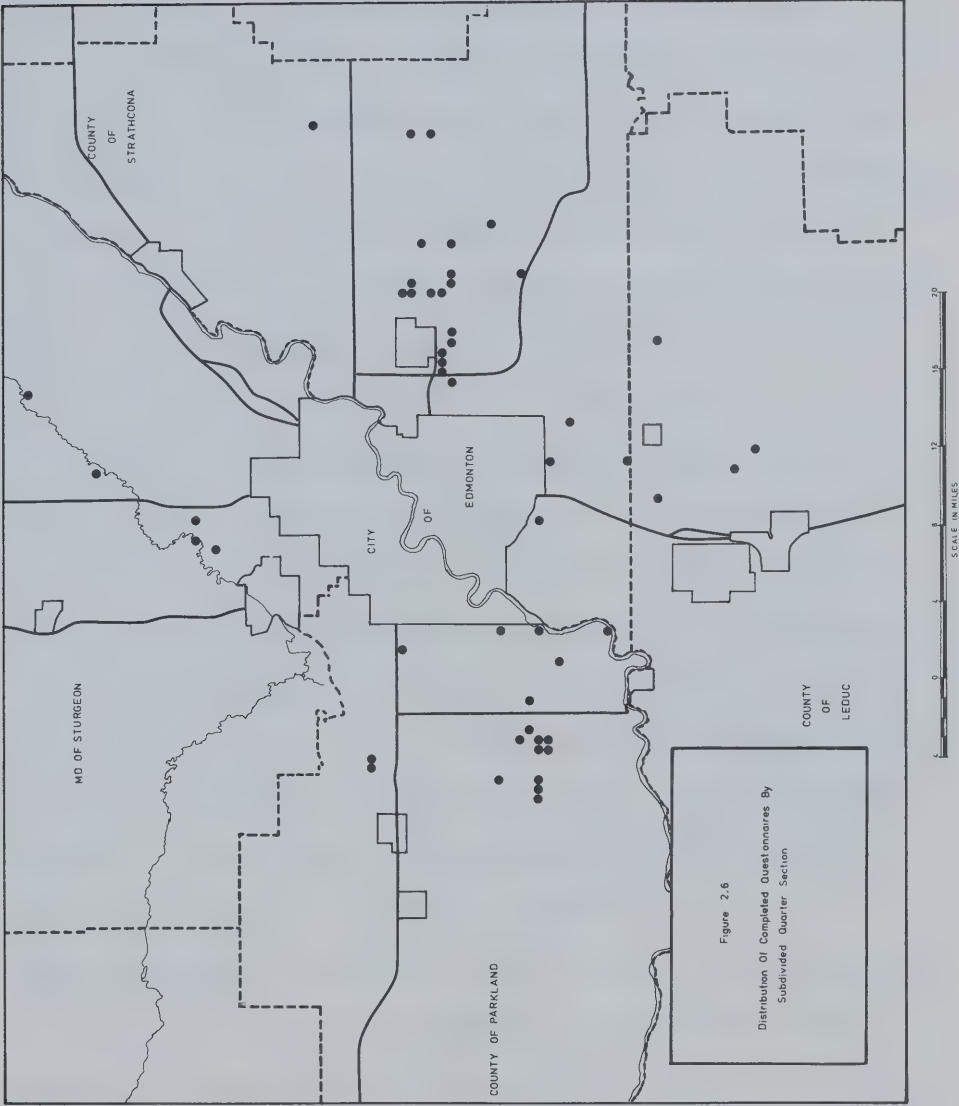
Note: Seven questionnaires were returned incomplete.

Source: Country Residential Survey, 1973

The spatial distribution of the survey sample is illustrated in Figure 2.5. A response approximately equal in proportion to the number of questionnaires distributed was received from each municipality. The spatial distribution of responses as shown in Figure 2.6 illustrates that with the exception of the extreme western part of the study area all major concentrations of country residential development were presented in the survey.

Method of Distribution. The questionnaires were distributed by hand to randomly selected individual households located within selected





acreage subdivisions. This survey was conducted in this manner for several reasons. First, because of the manner in which the actual subdivisions included in the sample were chosen only the number of occupied households in each area was known; therefore, it was impossible to pre-select those to be included in the sample. Second, no mailing address or telephone number was available as the names of the residents remained unknown. Third, copies of registered plans which show the block and lot numbers of the individual parcels were not available for all subdivisions in the sample; therefore, a pre-distribution random selection of developed parcels could not be carried out.

When possible, the questionnaires were given to those households which upon solicitation indicated that they would be willing to take part in the study. In cases where at least one occupant of the household was at home when the questionnaire was distributed, verbal instruction that it was to be completed by the head of the household was given. In those cases where there was no one at home at the time of distribution a note was attached which contained this instruction. A covering letter and a stamped self-addressed envelope were also included with each questionnaire (see copy of questionnaire, Appendix I).

Method of Analysis. The methods used to analyze the returned questionnaires are three fold. First, frequency distributions of all the variables in the questionnaire were developed. Simple statistical tables were constructed from these and were used to present a considerable amount of purely descriptive information. Secondly, in the case of the more complex motivational questions 7, 8, and 14 where the respondents

were asked to indicate the importance of a selected number of variables, an attempt was made to combine the ratings of individual respondents into an overall measure of the considerations which were most important to the respondents as a group. Unfortunately, the respondents were not asked to rank the variables in order of importance; consequently, rank correlations between sub-areas could not be calculated. The method used was to construct frequency distributions for all the variables, and then to rank them in order of the frequency of response for (a) very important, (b) important, and (c) a combination (a) and (b). This was to determine which variables were important to the group as a whole. Third, an effort was made to look for associations between particular household and family characteristics and the factors expressed as important by the respondents. In order to test for relationships, cross-tabulations among alternative sets of variables (two variables at one time) were calculated. This was done to determine what relationships existed between the characteristics of the households and the answers given by the respondents. Chi square values were calculated and were considered significant at the .05 level of significance.

The summary and results of the analysis of this section are presented in Chapter 5.

Chapter 3

THE SUBDIVISION AND DEVELOPMENT OF LAND FOR COUNTRY RESIDENTIAL PURPOSES

This section is concerned with assessing the extent to which land in Edmonton's peripheral area is being converted from an agricultural use or a natural state to an essentially urban-oriented, country residential use. Attention is directed toward measuring the extent to which both the subdivision and the development of land for country residential and related purposes has occurred through space and time.

The number of parcels subdivided throughout the study area has continually outpaced the number required for immediate development. Two sources of demand are evident; speculative demand, in which case the lot purchaser has no intention of building in the near future, and actual demand, in which case the lot purchaser has intent on building in the near future. No attempt is made in this study to determine the number of lots used for purely speculative purposes. Two major periods of subdivision and development activity in the Edmonton area are readily discernible; that which occurred prior to 1968 and that which has occurred since that time.

SUBDIVISION AND DEVELOPMENT PRIOR TO 1968

Prior to the mid-1950s the supply of land available for small acreage residential development stemmed largely from a number of subdivisions remnant of the 1908 to 1912 'land boom' that prevailed throughout the Edmonton area. During this period large tracts of land were subdivided and

registered for speculative purposes. The subdivisions, most of which were totally undeveloped, extended for several miles outward from the city in a concentric pattern. When the 'land boom' subsided, many of the subdivisions were cancelled; those that were not provided Edmonton with a ready supply of land, sufficient to handle its growth for the next fifty years. With the passage of time most of these old subdivisions have become incorporated into the city and have undergone extensive replotting schemes to transform them into new residential and industrial subdivisions. Some, however, still remain outside the city's political boundary. These are located in close proximity to the north and west boundary of the city in the Municipal District of Sturgeon and the County of Parkland. These parcels, 84 in total, comprised virtually the total supply of small acreage parcels available for development in the study area prior to 1953.¹

Initially, these parcels were intended to be used for solely residential purposes, but the majority of them were developed as small scale agricultural holdings. In these cases, several small 'urban sized' lots have been combined to form larger parcels averaging approximately five acres in size. These parcels remained unoccupied until the 1930s, at which time some development began in what is now the County of Strathcona.² It continued spo-

¹This figure represents only those subdivisions located within the boundaries of the study area as defined in Chapter 2. It does not include any subdivisions located within the present (1972) area of the City of Edmonton. The actual number of parcels available for development during this period was likely considerably larger.

²The names and boundaries of Municipal Authorities in the study area have changed considerably through time. To avoid confusion, the current name of the municipality will be used in all cases.

radically throughout the 1930s, but halted when larger agricultural parcels of 20 to 40 acres were subdivided during the 1940s and early 1950s. Development on these parcels has resumed in recent years with a number of building starts located on them during the late 1960s and early 1970s. New homes have thus been constructed in close proximity to houses some forty years of age. The older dwellings were of poor construction, many have deteriorated considerably.

Prior to 1953 both the supply and the demand for small acreage parcels was maintained at a low level. By the end of 1952, 165 parcels out of a total of 258 were developed (63.5 percent). The majority of these were located in areas adjacent to the present city boundary. In 1953-54, the demand for small acreage agricultural holdings near the city increased substantially, primarily because of the willingness of the Department of Veterans' Affairs to assist war veterans to settle in rural areas as full or part-time farmers. Financial assistance in the form of long term, low interest loans was provided under the Veterans' Land Act 1942. Although the Act set no minimum size for a property intended for full-time farming, other than stating that "it must be large enough to be considered a potential economic unit for the type of activity contemplated," the Act did set the following minimum size requirements for small holdings to be used for part-time farming (Department of Veterans' Affairs, 1955, p. 9):

A small holding must consist of a minimum of two acres where the value of land and the cost of a suitable water supply is in excess of \$500.00 per acre; or three acres if it is \$500.00 or less.

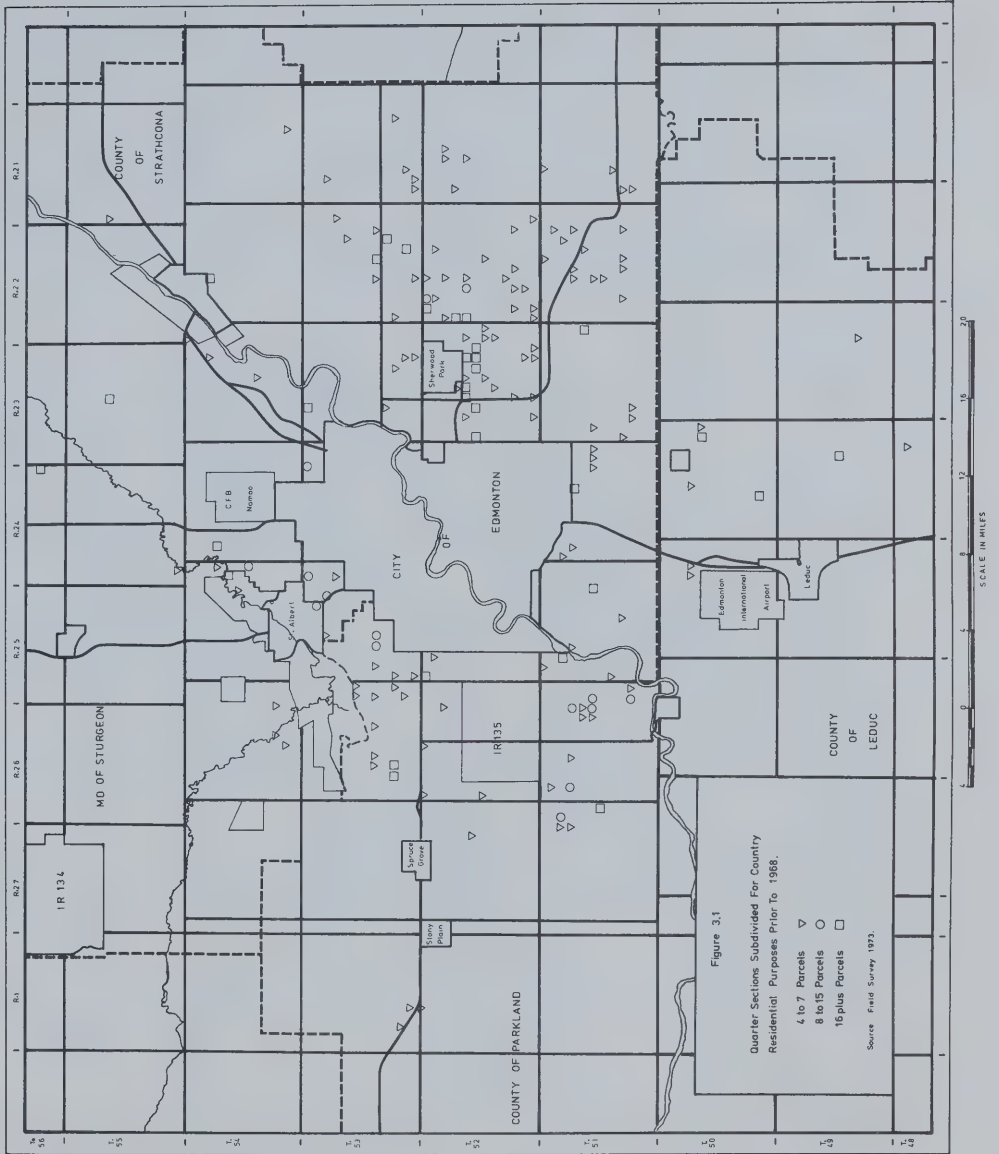
Land values in the Edmonton area at that time fell into the latter category; consequently, the minimum size for small holdings that would qualify for V.L.A. assistance was three acres.

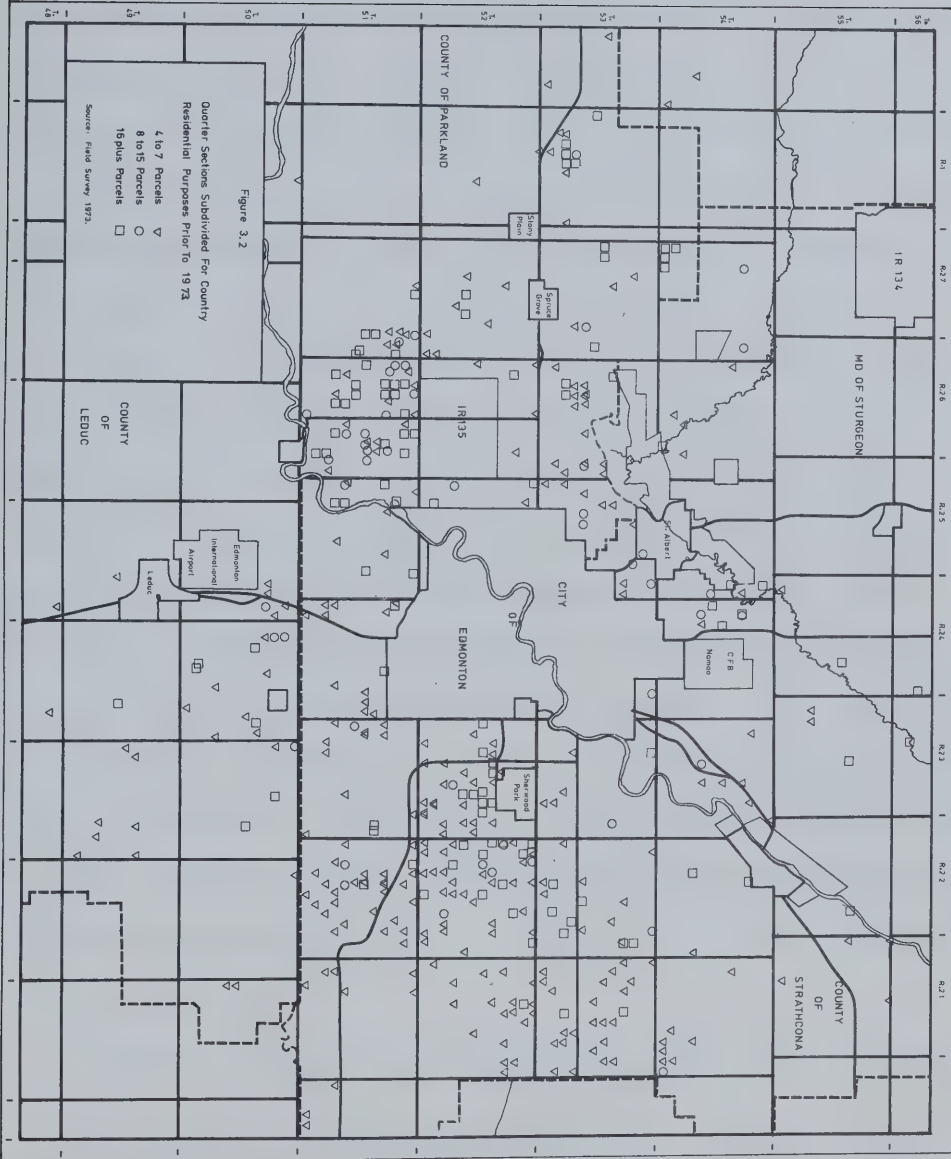
In 1953 subdivision activity began to increase and 71 parcels of land, averaging slightly over three acres each, were registered in the County of Strathcona. These were situated five to eight miles distant from the then city limits. At that time Strathcona was actively encouraging residential subdivision and had been supporting proposals for the establishment of a 'satellite' community within the municipality since January, 1951. The three acre small holdings subdivisions were concentrated in the vicinity of this proposed townsite which eventually evolved into the hamlet of Sherwood Park³ (see Figure 3.1). This general area was to remain the major concentration of subdivision activity in the Edmonton area until the early 1970s (see Figure 3.2). Increased subdivision activity during the mid-1950s was also experienced in other parts of the study area, but no other major areas of concentration were readily discernible.

While most of the land subdivided prior to 1965 was, at least initially, intended for small scale agricultural production, there were a number of parcels created solely for residential purposes. The majority of these were located adjacent to the north Saskatchewan River valley southwest from the city and along the Sturgeon River north and west of

³ Prior to the 1967 revision of the Subdivision and Transfer Regulations, subdivisions of three to twenty acres in size were considered to be agricultural and were labeled - small holdings. This category was changed to - country residential 'b' - in the 1967 revision as it became apparent that parcels of this size did not constitute viable agricultural units. For a more detailed discussion of the regulations see Chapter 4.

Strathcona supported the development of the Sherwood Park townsite in order to increase the residential population of the municipality. This was largely to thwart annexation proposals put forth by the City of Edmonton concerning the industrial area situated in the northwestern section of the municipality (see Plate 3.1).





Edmonton, between the city and the Town of St. Albert. These 'country estate' parcels averaged slightly over an acre in size and were subject to a number of stringent development restrictions (see Chapter 4 for additional information). These restrictions were the basis upon which a number of applications to subdivide were refused during the mid-1950s (Edmonton District Planning Commission Annual Reports, 4 through 8). This was particularly evident where amendments to the preliminary district plan had to be effected as a prerequisite to subdivision approval.⁴

Since most of the parcels were considered to be agricultural, they were generally located on land with a high capability for agriculture.⁵ This was especially true in the municipalities of Sturgeon and Leduc. Most of the intensive 'cluster type' subdivisions (containing 16 or more parcels) in the municipalities of Strathcona and Parkland were concentrated in those areas which contained the highest quality agricultural land. These parcels did not prove to be viable agricultural units, a fact that was recognized by the District Planning Commission as early as 1954.⁶ Consequently, the majority of them have been developed solely as country residences. There is very little evidence to indicate that any significant commercial form of agricultural enterprise, outside of the

⁴See discussion on country residential policy and regulations, Chapter 4.

⁵Includes land with an agricultural soil capability rating of 1 to 3 as determined by the Canada Land Inventory.

⁶Prior to 1963 the Edmonton Regional Planning Commission was called the Edmonton District Planning Commission.

Table 3.1

Percentage of Parcels Developed by Municipality and Year, 1960 to 1973

Year	County of Strathcona	County of Parkland	M.D. of Sturgeon	County of Leduc	Total Study Area
1960	70.08	33.97	55.93	40.51	58.27
1961	59.23	27.31	50.00	41.36	50.62
1962	61.17	26.35	57.14	38.92	51.98
1963	63.46	26.22	61.53	39.63	52.80
1964	64.48	28.76	58.41	40.76	54.54
1965	66.80	29.94	56.07	40.00	55.25
1966	69.32	29.44	56.48	38.22	55.60
1967	72.36	20.87	56.25	39.83	58.08
1968	71.24	24.84	60.50	38.02	56.51
1969	64.11	24.54	46.06	37.87	50.92
1970	57.89	20.82	34.05	42.32	49.35
1971	52.98	19.47	33.23	33.94	38.65
1972	57.20	23.13	37.99	38.39	41.97
1973	51.09	29.48	39.15	43.83	42.69
Average, 1969-1973	62.95	26.93	50.05	39.59	50.83

Source: Author's compilation of land assessment and building permit data, Edmonton Regional Planning Commission Annual Reports.

Table 3.2
Percentage Increase in Subdivision and
Development by Year, 1961 to 1973

Year	Strathcona		Parkland		Sturgeon		Leduc		Total Study Area	
	Subdivided	Developed	Subdivided	Developed	Subdivided	Developed	Subdivided	Developed	Subdivided	Developed
1961	29.37	9.37	31.41	5.6	11.20	14.89	49.15	33.00	28.96	12.03
1962	11.14	14.76	16.58	12.5	15.50	7.40	3.40	18.18	12.12	15.14
1963	6.97	10.99	19.66	19.35	10.06	12.07	5.49	7.6	9.69	11.46
1964	8.89	10.65	4.54	14.66	12.19	15.38	5.21	5.35	8.18	11.52
1965	5.66	9.45	10.70	12.79	11.41	9.3	5.94	1.69	7.63	9.22
1966	3.50	7.40	12.87	11.00	9.75	4.88	.93	1.66	6.09	6.75
1967	4.88	9.48	4.77	6.3	4.88	9.30	3.70	3.27	4.80	9.49
1968	9.30	7.61	20.00	11.86	29.36	6.38	6.25	14.28	11.80	8.76
1969	23.45	11.09	28.9	13.63	25.47	25.00	21.85	12.19	26.67	14.17
1970	21.67	9.87	54.83	31.33	14.54	28.00	56.74	15.85	31.39	14.35
1971	24.98	14.48	64.48	53.80	30.62	15.00	21.86	18.94	37.58	19.87
1972	10.41	19.21	20.82	43.56	13.28	25.00	11.47	27.43	14.43	24.27
1973	31.97	21.30	22.37	64.14	26.84	42.60	19.26	23.57	29.29	29.98

Source: Field Survey 1972 and Edmonton Regional Planning Commission Annual Reports.

Author's compilation of tax assessment, building permit, and subdivision application and plan data.

occasional fur farm or nursery, has ever been conducted on these parcels.

In 1953 approximately 73 percent of the parcels available for development throughout the study area were occupied. By 1960 this figure had dropped to 58 percent as subdivision activity during the late 1950s exceeded development by a considerable margin.⁷ This continued until 1962 at which time subdivision activity diminished in intensity and was exceeded by development (see Table 3.1)⁸ This trend continued throughout the study area through 1968 with only slight annual gains occurring in the total percentage of parcels occupied.

As is evident in Tables 3.1 and 3.2 the rate of development varied significantly among the four municipalities with the County of Parkland consistently lagging far behind the others. The County of Strathcona, on the other hand, consistently rated the highest in terms of the percentage of parcels occupied. As was the case with subdivision activity, most of the country residential dwelling starts which occurred during this period were concentrated near Sherwood Park in the County of Strathcona. This concentration is illustrated in Figure 3.3. Although it illustrates development up to 1973, many of the dwelling starts represented in the figure were completed prior to 1967 (Table 3.3). During the early 1960s, fewer subdivisions were approved in this area on cultivated land of high agri-

⁷The statistics used in this section were derived from three major sources: registered plans of subdivision; building permits; and tax assessment. The data were collected from the files of the Tax Assessment Officers and the Development Control Offices (where applicable) of the four municipalities in the study area.

⁸Intensity is measured in terms of percentage annual increase.

Table 3.3

Percentage of Parcels Developed by
Year Subdivided, 1953-1972

Year Subdivided, 1953-1972																					T O T A L S U B D E V		
YEAR DEVELOPED																							
53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	NO			
53	13.5	18.9	6.70	4.05	5.40	4.05	8.15	1.74	4.05	1.74	2.70	4.05	2.70	2.70	4.05	-	1.74	-	-	-	86.17	74	
54		2.53	3.79	11.39	6.32	1.26	2.53	1.26	3.79	2.53	1.26	1.26	-	1.26	1.26	2.53	1.26	-	1.26	-	45.49	79	
55			8.10	10.8	2.70	16.2	8.15	8.10	5.40	5.40	2.70	5.40	5.40	-	-	2.70	-	-	-	-	81.00	37	
56				2.12	8.51	23.4	17.63	2.12	4.25	2.12	8.51	4.25	-	4.25	-	-	-	-	2.12	-	72.28	47	
57					10.34	11.20	6.62	17.24	4.31	8.62	4.31	2.58	2.58	3.14	4.31	0.86	-	-	-	-	76.68	116	
58						12.08	8.72	7.60	4.39	3.29	3.29	4.39	3.29	2.19	2.19	3.29	3.29	2.19	-	3.29	60.36	91	
59							4.14	8.87	6.73	7.69	5.17	1.77	5.32	0.53	1.18	7.10	4.14	1.18	2.36	0.53	59.12	169	
60								8.53	4.87	8.53	1.21	1.21	1.21	3.65	-	2.43	-	1.21	2.43	2.43	37.71	82	
61									4.74	2.52	2.33	7.14	5.95	2.38	4.36	2.38	4.76	4.36	6.74	2.38	53.54	252	
62										8.08	7.35	6.61	4.41	2.94	2.94	0.73	4.41	3.67	3.67	4.41	49.22	146	
63											1.63	13.1	5.73	3.27	2.45	2.45	2.45	4.09	4.09	5.73	44.99	122	
64												5.30	7.07	5.30	13.27	7.07	9.73	1.76	5.30	3.53	58.33	113	
65													7.01	8.77	7.01	5.26	10.52	3.50	2.63	2.63	47.33	114	
66														7.14	11.22	13.26	6.12	6.12	6.12	1.02	51.00	98	
67															12.19	8.53	10.97	3.65	3.65	8.53	47.52	82	
68																8.53	13.27	9.47	4.73	3.79	39.79	211	
69																	7.50	14.02	11.06	7.12	39.75	533	
70																		4.04	13.5	12.24	29.78	792	
71																				4.80	16.41	21.21	1249
72																					6.06	6.06	

Source: Field Survey, 1973.

cultural capability. Plate 3.1 is an aerial photograph of the Sherwood Park area taken in 1962. It is evident from this that early subdivisions dated 1954 and 1955 were located on land which had been cultivated; however, by 1961 land in the Cooking Lake moraine immediately south and east of Sherwood Park became the area of subdivision concentration.⁹ These subdivisions, although hypothetically agricultural, were intended solely for residential purposes. The soils capability for agriculture was low whereas the topography and vegetative cover was conducive to residential development. Plate 3.2, taken in 1973, reveals that very little additional cultivated land was subdivided after 1962. The difference in density between the urban residential subdivisions of Sherwood Park and its surrounding country residential subdivisions is graphically portrayed in the two plates.

The only other part of the study area experiencing concentrated development at that time was the bank of the North Saskatchewan where a number of high density small acreage (one and one-half acre parcels)

⁹"The entire study area was glaciated, resulting in prominent glacial moraine, major past glacial lacustrine plains and scattered post glacial sand dune regions. Elevations range from 2600 feet in the morainic region in the northwest to 1900 feet in the northeastern part of the North Saskatchewan River valley.

There are two major topographic regions in the area. South of the North Saskatchewan River is the Cooking Lake moraine which constitutes the eastern half of the area. This region is undulating to hilly with mainly knob and kettle topography. Several large lakes such as Miquelon and Cooking serve as internal drainage basins. The western half of the area is a lacustrine plain of level to gentle rolling topography and contains many shallow depressions. Many intermittent water courses cross this part of the area which is interspaced with sloughs, marshes, and pothole ponds.

The open cultivated parkland which covers most of the area is dotted with groves of trembling aspen. The Cooking Lake moraine is the only significant woodland in the area." (Canada Land Inventory, Land Capability for Recreation, 1972).

Plate 3.1 Country Residential Development, Sherwood Park Area 1962.



Source: Alberta Energy and Natural Resources, 1962.

Plate. 3.2 Country Residential Development, Sherwood Park Area 1973



Source: Alberta Energy and Natural Resources, 1973

subdivisions were allowed.¹⁰ These subdivisions were strictly residential and contained dwellings which were generally larger and of higher quality than those in the other areas. Furthermore, few, if any, dwellings were allowed to be moved onto these properties, a practice that was not uncommon elsewhere.

The development of existing country residential subdivisions continued to outpace the creation of new parcels through the mid-'60s. In 1967 the percentage of parcels developed reached a high of 58 percent, the highest level achieved since 1960 and unequalled since (Table 3.1). The percentage of developed parcels varied considerably throughout the study area with the County of Strathcona ranking highest with a percentage of occupancy of 72 percent (Table 3.1).

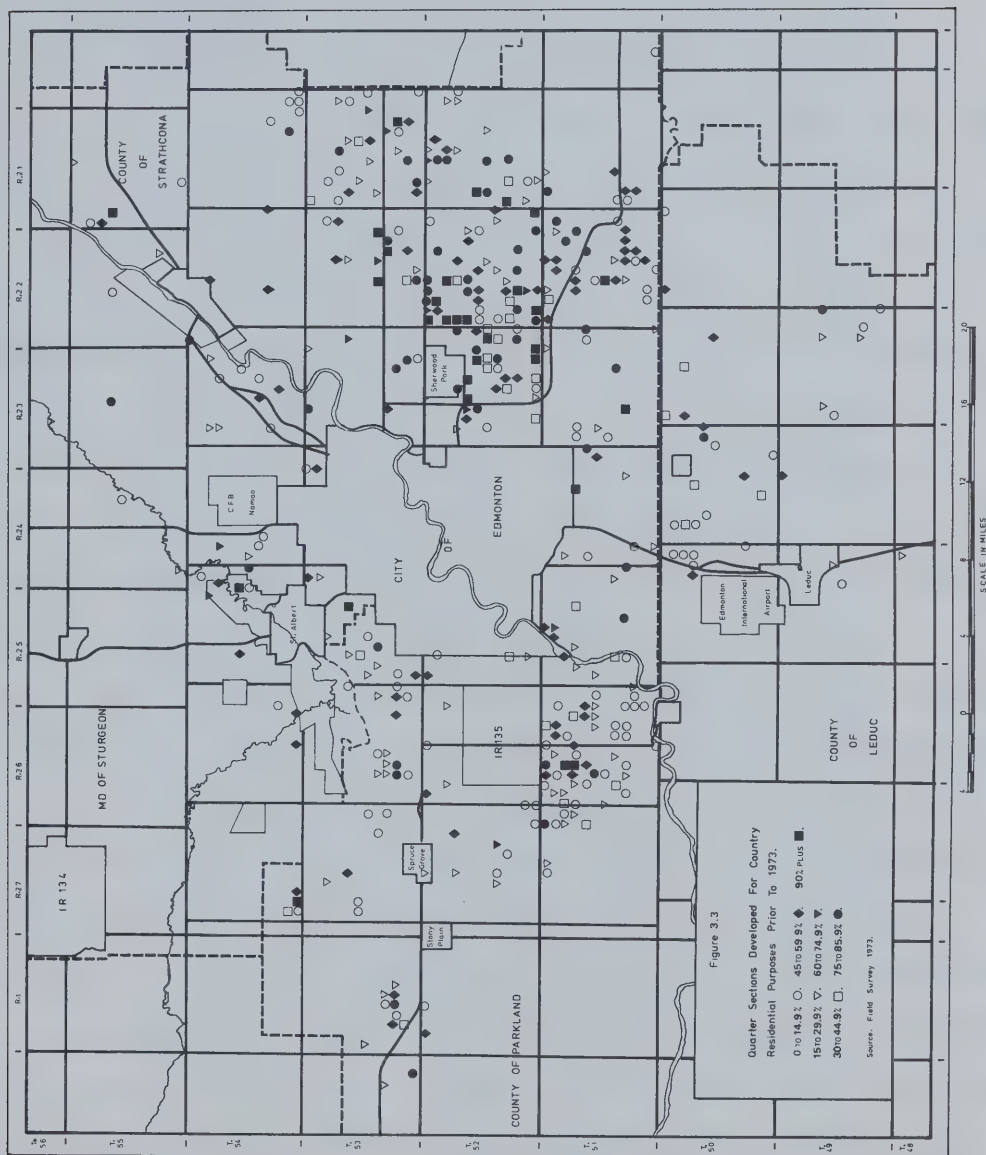
Strathcona remained the major area of both subdivision and development until 1968, though both Parkland and Sturgeon experienced larger annual percentage increases (Table 3.2; Figure 3.1; Figure 3.2). By 1968 a new area of subdivision concentration became evident in the County of Parkland. This area, referred to as Township 51-26, is situated on an environmentally sensitive sand dune area southwest of Edmonton. The dunes are quite closely spaced with small lakes or sloughs frequently occupying interdunal areas. The terrain is quite heavily wooded and is generally comprised of soils with low ratings for agricultural productivity (E.R.P.C. 1974, p. 15). The

¹⁰ Many of these subdivisions were annexed to the City in 1972 hence they are not included in this study.

surface topography of the area was attractive, the access to Edmonton was excellent, the land was inexpensive, and very little was cultivated. In view of this, developers faced little opposition from political and planning agencies in their efforts to subdivide in the area. In 1970, Parkland experienced a 55 percent increase in the total number of registered country residential parcels. Of the 335 parcels concerned, 192 (57 percent) were located in Township 51-26.

While subdivision activity in Parkland was taking place at an increasingly rapid pace, development was not. Parkland has consistently rated lowest in terms of the percentage of its total supply of parcels that have been developed and occupied (Table 3.1), averaging only 27 percent since 1953. This is compared to 63 percent in Strathcona, 50 percent in Sturgeon, and 40 percent in Leduc.

The degree to which development occurred prior to 1973 is illustrated in Figure 3.3. The concentration of development in Strathcona is readily evident as is the lack of development in Parkland where only a small number of subdivisions were greater than 50 percent developed. In general, it is evident that subdivisions located in particularly scenic areas or within 1.5 miles of a major highway developed most rapidly. The areal extent of subdivision activity was determined prior to 1965. Most of the subdivisions approved since then (to 1968) have served to 'fill in' this area. The major exception is a number of low density 40 acre parcels created and developed in the Cooking Lake Moraine between Sherwood Park and Elk Island Park.



SUBDIVISION AND DEVELOPMENT POST 1968

The County of Parkland

The County of Parkland became the most prominent area of subdivision after 1968. In 1971, an increase of 64 percent occurred. Thus, the actual number of country residential parcels was doubled in less than two years.

The majority of this activity was concentrated in Township 51-26. The extent of this subdivision and the rapidity with which it has taken place is illustrated in Plates 3.3 and 3.4. Plate 3.3 is an aerial photograph of the northwestern portion of the Township in 1967. At that time only one quarter section in the area covered by the photograph had been subdivided and this had not undergone any noticeable development. By the time Plate 3.4 had been taken in 1973, an additional 14 quarter sections had been subdivided into country residential parcels. Only one of these subdivisions have undergone 75 percent or more development; all of the rest are considerably lower than 57 percent (Figure 3.3). By the end of 1972, Township 51-26 was the most intensively subdivided Township in the entire study area (excluding the Hamlet of Sherwood Park) with a total of 726 country residential parcels compared with a total of 613 in the Township near Sherwood Park. Up to and including 1973, the total area of land subdivided for country residential purposes was 6,667 acres, approximately 29 percent of the Township's total area. The parcels ranged in size from one acre to greater than twenty acres with 59 percent being in the three to five acre size category. Prior to 1968, not one parcel in this size category had been registered (E.R.P.C., 1974).

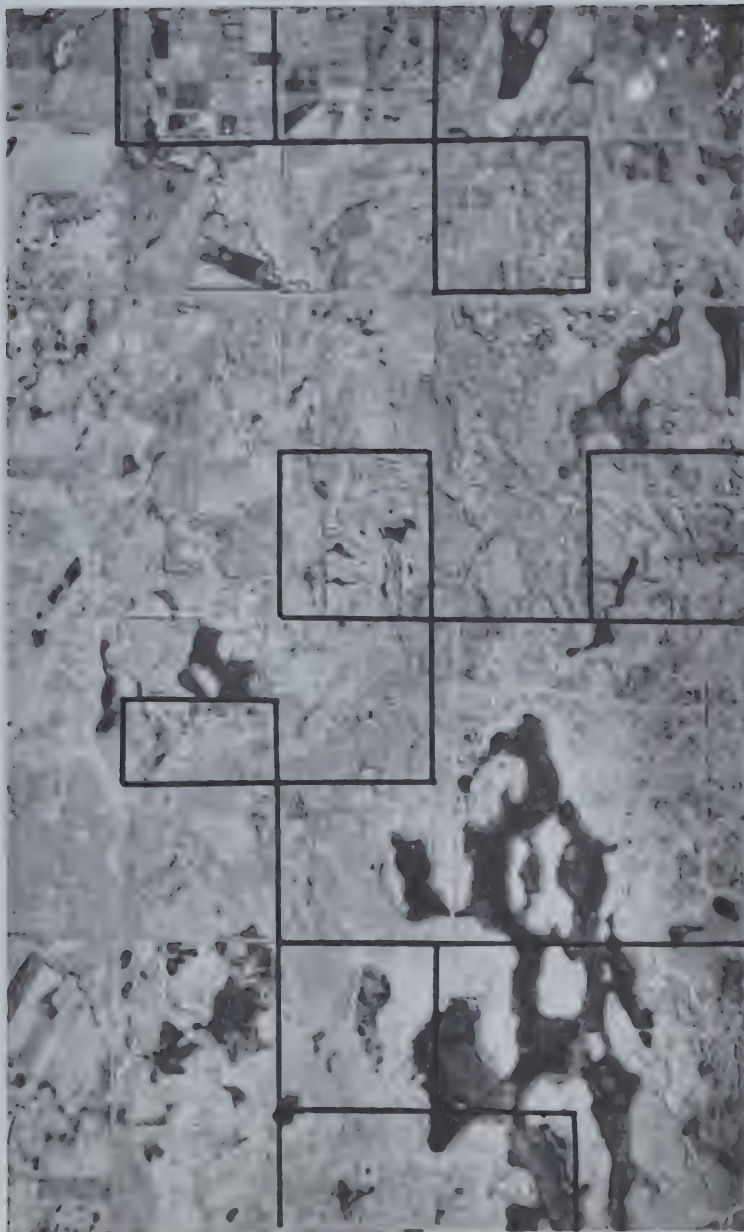
Subdivision activity in the county peaked in 1971. In 1972, the

Plate 3.3 Country Residential Development, Part Tp. 51 - R. 26. W4M. 1967.



Source: Alberta Energy and Natural Resources, 1967.

Plate 3.4 Country Residential Development, Part Tp.51 - R.26, W4M. 1973.



Source: Alberta Energy and Natural Resources 1973.

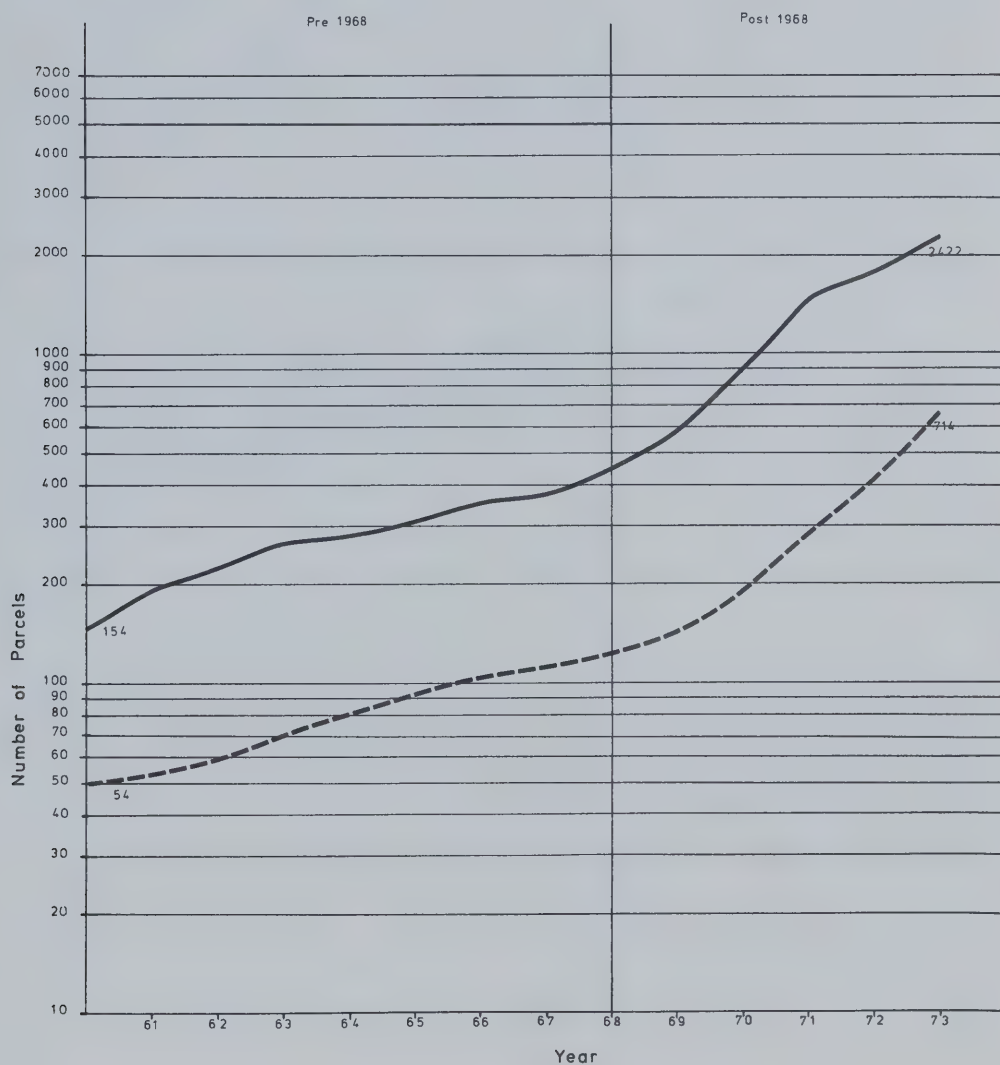
percentage increase in parcels created was down almost 44 percent from that of the previous year. Development, on the other hand, increased substantially and surpassed subdivision by a considerable margin (Table 3.2). Figure 3.4 represents the cumulative totals of both subdivision and development. The intensive subdivision activity which occurred in the county from 1967 to 1971 is readily observable. The reduction in the slope from 1972 to 1973 suggests that subdivision was levelling off and that although the number of parcels being created was increasing, it was increasing at a decreasing rate (see Table 3.2).

The percentage increase in construction starts did not level off; rather, it increased substantially over the same period of time. The slope of the lines on Figure 3.4 suggests that subdivision and development have occurred at similar rates but with considerable lag. This lag has shortened considerably in recent years. In 1970 only the supply of lots available in 1961 had been developed. By 1973 the 1969 supply of lots was consumed. If this trend continues, less than a four year supply of vacant lots exists.

The County of Strathcona

A similar trend occurred in Strathcona prior to 1967, but subdivision activity increased at a faster rate than did development. As was the case with Parkland, the rate of subdivision increase declined from 1971 while the average rate of change for building starts had increased slightly (see Figure 3.5). During this period parcel creation increased at an average rate of 22 percent while construction starts increased at a rate of 18 percent. The 1967 to 1970 figures for the two areas were 15 percent and 9.5 percent

Figure 3.4 Cumulative Total of Parcels Created and Developed for Country Residential Purposes to 1973: County of Parkland

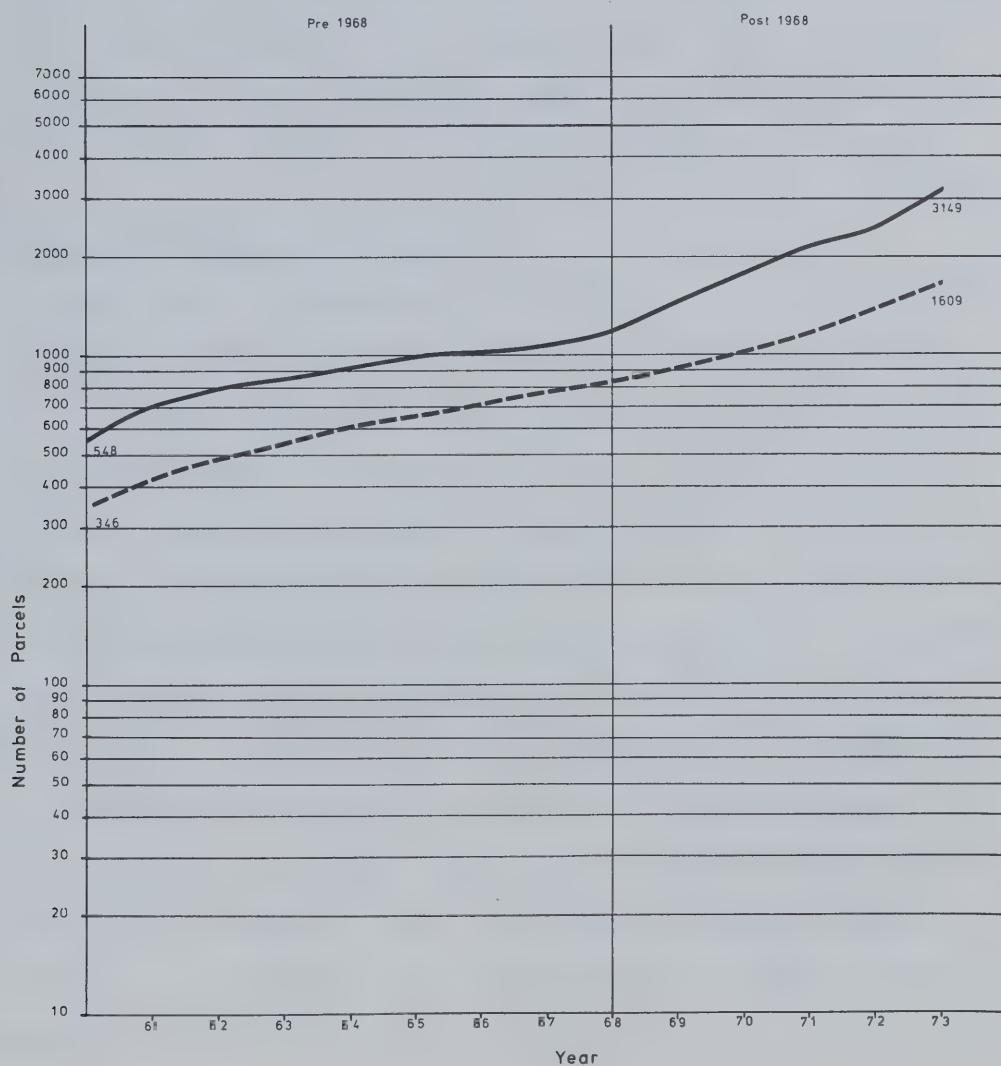


Source: Registered Plans of Survey.

Tax Assessment Forms, 1973.

— Parcels Subdivided
 --- Parcels Developed

Figure 3.5 Cumulative Total of Parcels Created and Developed for Country Residential Purposes to 1973: County of Strathcona



Source: Registered Plans of Survey,
Tax Assessment Forms, 1973.

— Parcels Subdivided
- - - Parcels Developed

respectively. Subdivision activity in Strathcona is increasing at a greater rate than is development though the discrepancy between the two has diminished through time. The time lag between subdivision and development has remained relatively constant (approximately four years) over time, although it has shortened slightly in recent years.

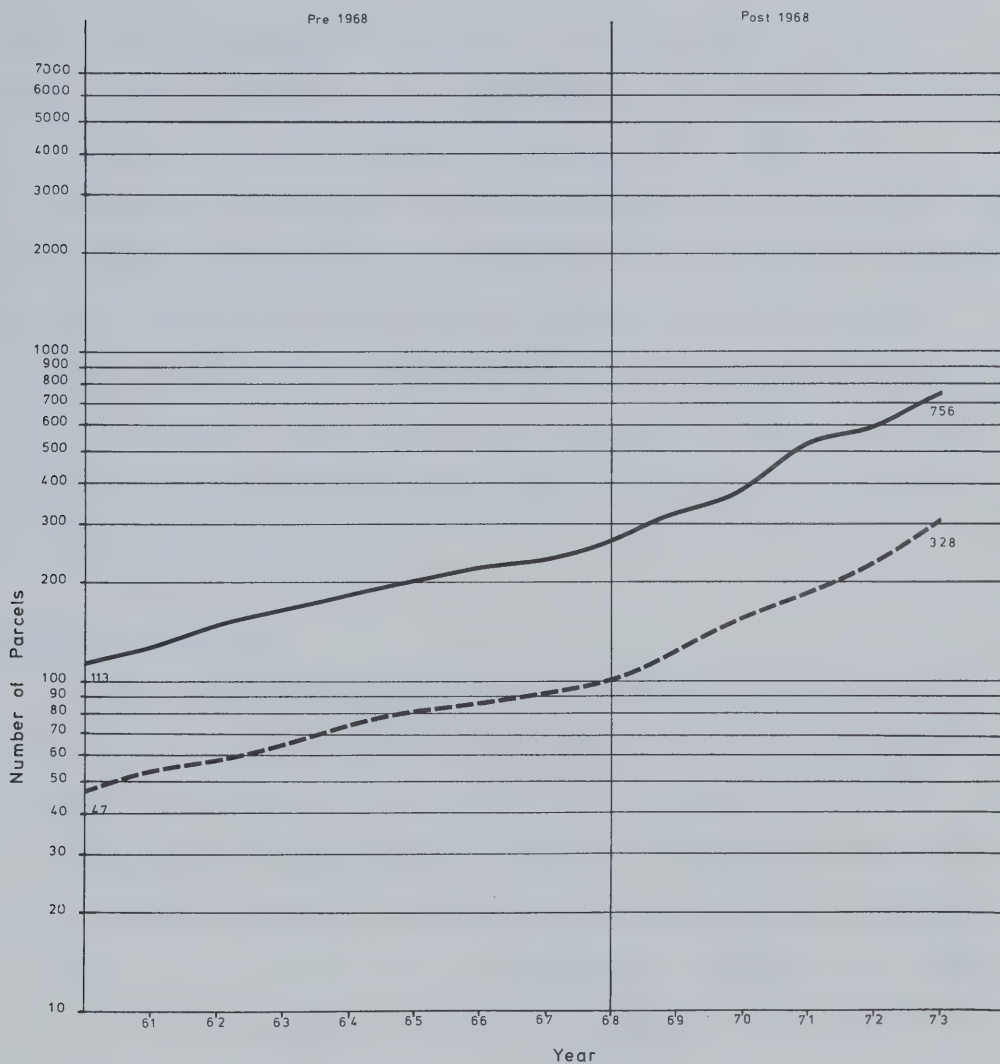
The Municipal District of Sturgeon

Although not as pronounced, recent trends in the M.D. of Sturgeon was similar to those experienced in Parkland. Figure 3.6 illustrates that the rate at which parcel creation has increased has declined while the rate of increase in development has risen. As was the case with Parkland a slight tendency toward convergence has occurred in the last few years, though it is not as pronounced. Over an extended period the lines in Figure 3.6 representing parcel creation and development have roughly paralleled one another; an indication that the two activities are proceeding at much the same rate but with a considerable time lag. This has shortened considerably in recent years. The 1960 supply of lots was not used up until 1968-69, however, the 1969 supply was almost entirely consumed in 1973. This indicates that development is 'catching up' to subdivision as less than a five year supply of lots remained.

The County of Leduc

The County of Leduc, like the other three municipalities in the study area, experienced a surge of subdivision activity from 1968 through 1970. During this period the number of parcels created in the county

Figure 3.6 Cumulative Total of Parcels Created and Developed for Country Residential Purposes to 1973: M.D. of Sturgeon



Source: Registered Plans of Survey.

Tax Assessment Forms, 1973.

— Parcels Subdivided

- - - Parcels Developed

increased at an average annual rate of 22 percent. In the 1971 to 1973 period this has levelled off to an annual increase of 17.5 percent. Thus Leduc experienced a decline in the rate at which subdivision took place. Although numerically more parcels were being created, the rate at which they were being created was decreasing (see Figure 3.7).

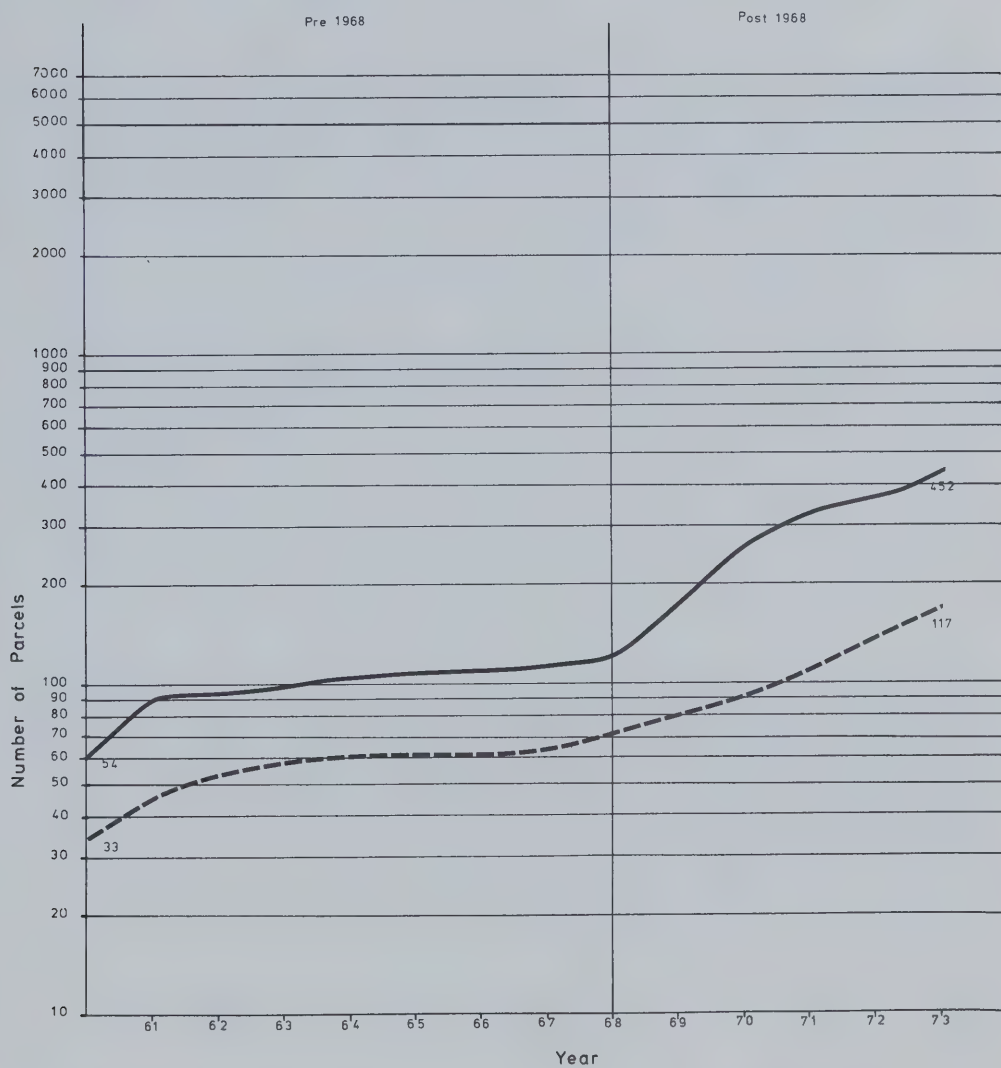
Development in the 1967 to 1970 period increased at a rate of 11 percent annually, considerably lower than that of parcel creation. However, during the 1971 to 1973 time frame, the average rate of development increased to 23 percent and surpassed subdivision by an average annual rate of 5.8 percent. Thus, the County of Leduc has followed the trend towards convergence evidenced in the County of Parkland and the M.D. of Sturgeon (see Figure 3.7).

The Total Study Area

In recent years, subdivision activity throughout the study area has increased at a slower rate than development though more parcels were still being created than developed (see Figure 3.8).

Convergence is occurring but very slowly. Furthermore, there is little evidence to support the contention that the trend is a long term one; rather, the opposite is true. Based on past trends, as illustrated in Table 3.1, a re-occurrence of intensive subdivision activity is likely. The amount of subdivision that will be allowed to take place in the future depends on a host of institutional, social, economic, and environmental factors which can undergo sudden violent change; therefore, any prediction for either future subdivision or development based

Figure 3.7 Cumulative Total of Parcels Created and Developed for Country Residential Purposes to 1973; County of Leduc



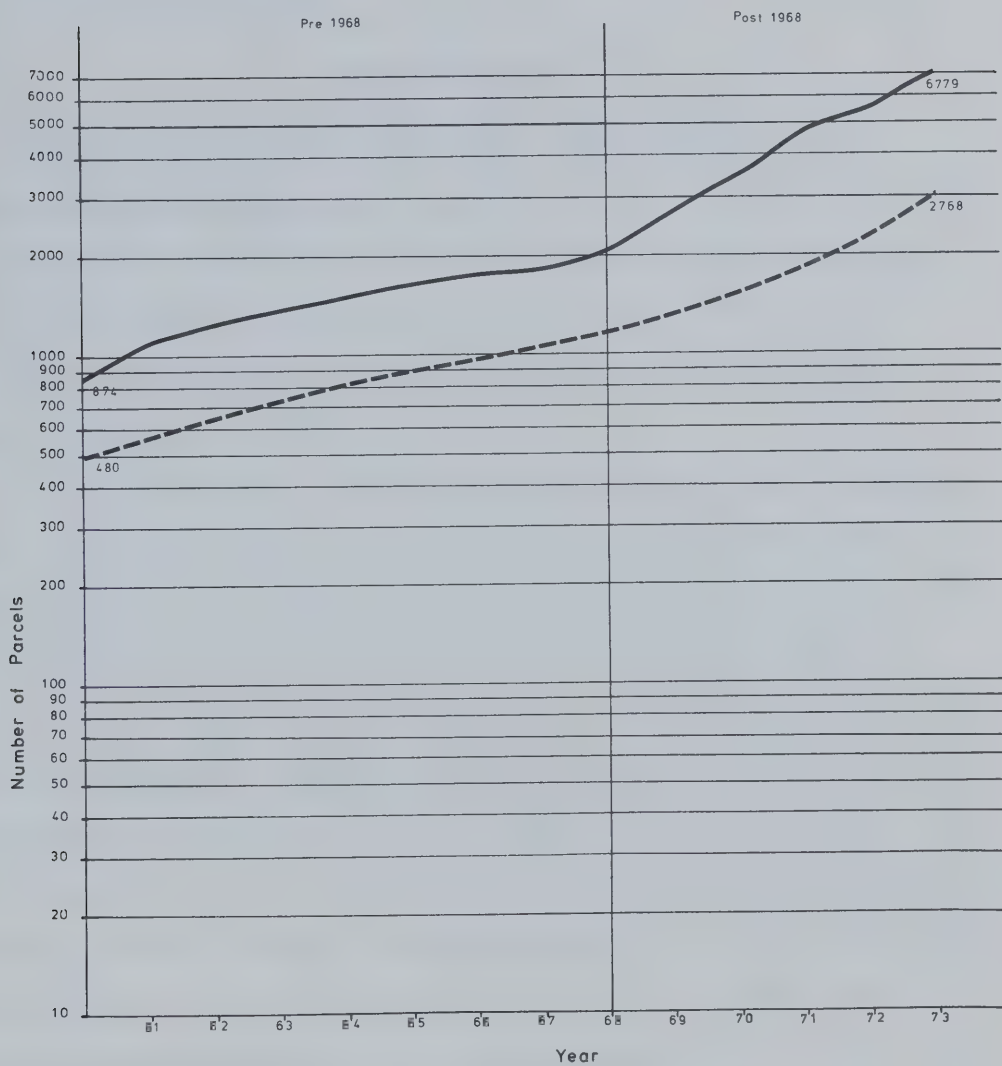
Source: Registered Plans of Survey.

Tax Assessment Forms, 1973.

— Parcels Subdivided

- - - Parcels Developed

Figure 3.8 Cumulative Total of Parcels Created and Developed for Country Residential Purposes to 1973: Total Study Area



Source: Registered Plans of Survey,
Tax Assessment Forms, 1973.

— Parcels Subdivided
- - - Parcels Developed

solely on past trends is likely to be most inaccurate, unreliable, and of little practical value.

DEVELOPMENT LAG

Throughout the study area the rate at which development has occurred has been considerably lower than the rate of subdivision. This has resulted in the creation of a large surplus of parcels which may sit idle or vacant for years. This lag in development is not the result of a short term adjustment in supply and demand, but rather gross inefficiency in resource allocation.

The extended period of time which lapses from the date that parcels are created to that when they are developed is illustrated in Table 3.3. It is evident that most development occurs within six years of date of registry and that infilling of the remainder may take years to complete. Furthermore, it is unlikely that some lots may ever be developed because of building constraints and so on. The table does show that an oversupply of lots exists throughout the study area. This is particularly true in the County of Parkland where only 29.5 percent of the total lots available are developed (Table 3.3). This oversupply has, however, continually diminished as the time lag between subdivision and development has become considerably shorter in recent years.

¹¹Summary data obtained from the Edmonton Regional Planning Commission for 1974 and 1975 demonstrates that the trend toward convergence evident in 1971 and 1972 has continued in the Counties of Parkland and Strathcona, however, parcel creation has outpaced parcel development in Sturgeon and Leduc by a considerable margin.

Chapter 4

INSTITUTIONAL AND PHYSICAL FACTORS

In every time and place, the control of land has been of great importance to mankind. From early times down to the present, people have claimed land for use in the raising and harvesting of food, timber and game, for the extraction of minerals, and for the "home territory" of individuals or groups. As modern economics have developed, land has become a storehouse of wealth, and its ownership a source of social, political and economic power. Land, and improvement to land, is routinely bought, sold, traded leased, taxed and mortgaged. Each of these transactions can routinely occur because an identifiable set of property rights is transferred, or property rights are altered in a predictable way. Under these circumstances it comes as no surprise that people generally feel very strongly about any changes in the 'bundle of rights' associated with land ownership.

Property owners have tended to believe that property rights are absolute and unchanging - that "a man's home is his castle", and the courts have generally agreed. This relatively simple principle would probably provide an adequate basis for decision-making on the use of the land if the owner(s) were the only person(s) affected by the way in which each ownership tract is used. Experience has shown this not to be the case. Spillovers occur between adjacent property owners and between countries, provinces (sic), and regions of our country. The characteristics that make land important to man assure that decisions about its use will have impact on all persons in a modern economy (Cornhusker Economics, June 4, 1975).

The intent of this chapter is to identify institutional, environmental, and economic factors which influence both the pattern and rate of the subdivision and development of land for country residential purposes in the Edmonton area.

INSTITUTIONAL FACTORS

This section identifies the degree to which the three levels of government and their agencies are empowered to control or influence land

use with respect to country residential development. This analysis is concerned with the description and interpretation of relevant legislation and policy.

This section is presented in three parts. Part One discusses legislation peculiar to subdivision and development in a provincial perspective. In Part Two the specific policies of local planning agencies toward country residential development are determined. Part Three concludes this section by providing insight into the empirical workings of these institutions.

PART ONE: SOURCES OF LEGISLATIVE AUTHORITY

Provincial regulation of land use is extremely diversified as the enabling legislation of virtually every land-related government department authorizes regulations pertaining to land use. A number of these legislative statutes are listed below:

- The County Act
- The Alberta Government Act
- The Ground Water Control Act
- The Land Titles Act
- The Local Authorities Board Act
- The Municipal Government Act
- The Planning Act
- The Public Highways Act
- The Public Lands Act
- The Department of Environment Act

Through each of the above statutes, some agency or agencies has or have been vested with the power to effect a degree of control over specific land uses. Although each document may deal with a variety of uses, The Planning Act, is the major instrument employed for matters related to country residential subdivision and development.

The Planning Act

The Planning Act was first drafted in 1913. Since enactment it has undergone eight major revisions. These took place in 1922, 1928, 1929, 1942, 1948, 1953, 1963, and 1970. The stated purpose of the Act is (Planning Act, R.S.A. 1970, c. 276, Section 3):

....to provide means whereby plans and related measures may be prepared and adopted to achieve the orderly and economical development of land within the Province without infringing on the rights of individuals except to the extent that it is necessary for the greater public interest.

In structuring The Planning Act, the Provincial Government has made provision for the planning function to be legally conducted at three different levels, (1) the provincial, (2) the regional level, and (3) the local or municipal level. The Act makes provision for the establishment of planning agencies at each level with responsibility for implementing the legislation.

At the provincial level the act has created the Provincial Planning Board. At the regional level the planning agencies are the Regional Planning Commissions, and at the local level, the Act makes provision for Municipal Planning Commissions. In areas where commissions are not established some of the duties are assumed by the Municipal Council of an appointed officer.

The Provincial Planning Board

The Provincial Planning Board is an appointed non-political body composed of senior civil servants who devote time to the Board in addition to their regular duties. At the present time, the Board is composed of 15 members representing the following land-related government departments:

Alberta Municipal Affairs - 3 members

Alberta Transportation - 3 members

Alberta Environment - 2 members

Alberta Energy and Natural Resources - 3 members

Alberta Agriculture - 2 members

Alberta Education - 1 member

Alberta Parks and Wildlife - 1 member

The functions of the Provincial Planning Board, as it relates to country residential development, as as follows (Planning Act, R.S.A. 1970, c. 276, Section 6):

- (1) assists Regional Planning Commissions in the coordination of their activities.
- (2) decides appeals from decisions of the Regional Planning Commissions respecting amendments to regional plans.
- (3) decides appeals on applications to subdivide from the Regional Planning Commissions.

The Regional Planning Commission

The Regional Planning Commissions are composed of representatives from each municipality in the regional planning area. These representatives are appointed by the local council. Membership of the commission

is determined by the Minister of Municipal Affairs. Members representing the Province on the commissions are appointed by the Provincial Planning Board, and represent such government departments as Agriculture, Education, Transportation, Environment, and Business Development and Tourism.

The functions of the Regional Planning Commissions as they relate to country residential development are as follows (Planning Act, R.S.A. 1970, c. 276, Section 14):

- (1) prepare a regional plan for the commission area
- (2) prepare a preliminary regional plan for the purpose of controlling development during the period of preparation of the regional plan
- (3) advise and assist municipal councils on matters pertaining to planning
- (4) when requested, prepares and recommends to the council of a municipality represented on the commission:
 - (a) a development control by-law;
 - (b) a zoning by-law;
 - (c) a development scheme.
- (5) acts as the subdivision approval authority for the commission area

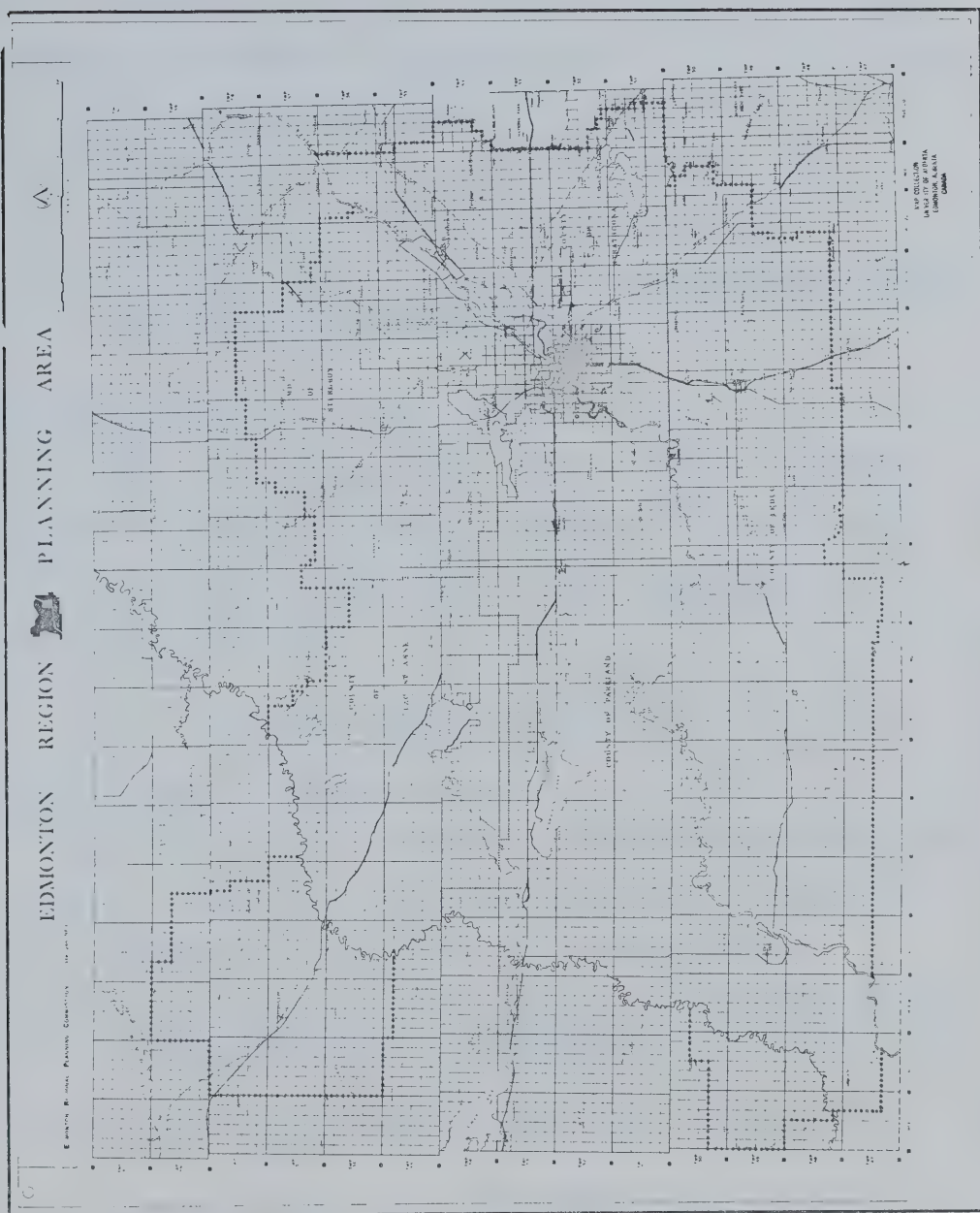
The chief source of power for the implementation of regional plans and development control exercised by the planning commissions is that of subdivision approval. The commissions are empowered to approve an application to subdivide only when it conforms to the conditions specified in The Subdivision and Transfer Regulation, pursuant to the Planning Act, and with the provisions of any regional plan or preliminary

regional plan that is in effect (Planning Act, R.S.A. 1970, c. 276, Section 14(e)).

The Edmonton Regional Planning Commission. The Edmonton Regional Planning Commission (originally named The Edmonton District Planning Commission) was established in June, 1950. It originally comprised the area of the City of Edmonton; the Towns of Beverly, Jasper Place, Morinville, Devon, Fort Saskatchewan, and St. Albert; the Municipal Districts of Morinville, Leduc, Sturgeon, and Stony Plain and representatives from the provincial departments of Public Works, Municipal Affairs, and Education (E.D.P.C. Annual Report 1951-52). Since that time the composition of the Commission has changed considerably. As the population of many small centres in the Commission area increased, its membership grew at a corresponding rate. Figure 4.1 illustrates the size of the Commission area in 1972. The present composition of the Commission is as follows:

- (1) City of Edmonton - 3 members
- (2) Five members from the rural municipalities; one from each county and municipal district
- (3) Nine members from towns - Devon, Dryaton Valley, Fort Saskatchewan, Leduc, Morinville, St. Albert, Stony Plain, Spruce Grove.
- (4) One member representing summer villages in the planning area.
- (5) Two non-elected members.
- (6) Five members from the provincial departments of Agriculture, Education, Transportation, Environment, Business Development and Tourism.

Figure 4.1



Municipal Councils

The functions of the municipal councils as they relate to country residential subdivision are (Planning Act, R.S.A. 1970, c. 276, Sections 94 to 142; Municipal Government Act, R.S.A. 1970, c. 246):

- (1) adopt general plan
- (2) pass a development control and/or zoning by-law
- (3) hear appeals from decisions of the Development Control Officer, or from the secretary-treasurer of the municipality who handles applications for development permits.

Development Officers

In some municipal jurisdictions, (Counties of Leduc, Strathcona, Parkland) the councils have appointed Development Officers to receive and decide applications for development permits (Planning Act, R.S.A. 1970, c. 276, Section 105).

PART TWO: INSTITUTIONAL CONTROLS

Regional Planning in the Edmonton Area

The primary function of the Edmonton Regional Planning Commission is to prepare a regional plan for the regional planning area which is to include (Planning Act, R.S.A. 1970, c. 276, Section 69(c)):

- (1) a map showing the division of all or part of the land in the regional planning area into areas of permitted land use classes or permitted densities of population ...
- (2) a schedule prescribing the uses of lands ..., within each of those areas.
- (3) proposals relating to the provision of highways, public roadways, services, schools, parks, and recreation areas, and the reservation of land for these purposes.

At the present time only the Metropolitan Part of the Preliminary Regional Plan (see Figure 4.2) has been completed. The area covered comprises only a small portion of the study area, therefore, the commission has had to rely on local development control and its power of subdivision approval to regulate development throughout the remainder of the regional planning area. In its efforts to formulate a regional plan the commission has repeatedly set and altered its policy toward the subdivision and development of land for country residential purposes.

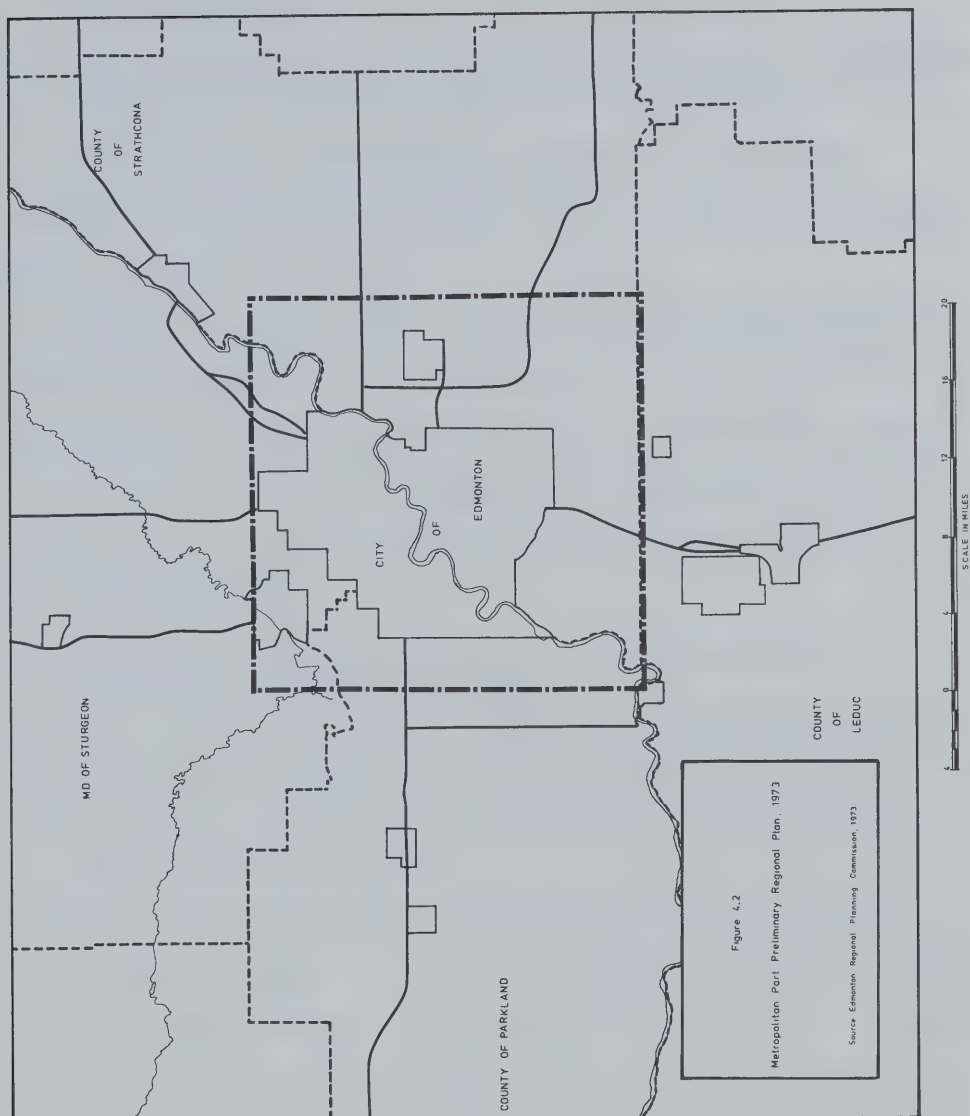
Commission Policy Toward Country Residential Land Uses: An Historical Perspective

In 1950, the Edmonton District Planning Commission recognized that the area which required the most immediate attention was that adjacent to the city limits. A number of studies were conducted and an Outline General Plan for the Edmonton Metropolitan Area was completed in 1952. This plan consisted of five zones (E.D.P.C. Annual Report, 1952-53):

- (1) "A" zone greenbelt
- (2) "B" zone greenbelt
- (3) General urban
- (4) Central zone
- (5) Industrial zone

Each of these zones was defined with permitted uses and conditions. As one of its permitted uses the "B" zone greenbelt included a "small holding, hamlet" category. Lands to be utilized for this purpose were subject to the following conditions (E.D.P.C. Annual Report, 1952-53, p.8):

- (1) Locations must be approved and be of limited and pre-determined size.



- (2) Subdivisions must be reasonably distant from other small holding hamlets.
- (3) Soil conditions must be suitable for development.
- (4) Subdivisions must be well set back from a highway. No individual holding may have direct access to a declared highway.
- (5) Parcels may be subdivided to a minimum size of two acres.

These controls were far from restrictive and do not appear to have been stringently enforced.¹

In early 1954, a preliminary study on small-holding development was presented to the Commission. It revealed that there had been a strong tendency for people to move outward from the heavily populated areas of the city to locales beyond the city limits where gas and electricity were readily available (E.D.P.C. 1953-54). These central motivating factors were indentified:

- (1) a desire to live in a semi-rural area away from the 'hustle and bustle' of the city;
- (2) a desire in the part of lower income families to supplement their income by engaging in minor agricultural pursuits.
- (3) a desire to take advantage of the tax differentials between rural and urban holdings.

The report also indentified the willingness of the Department of Veterans' Affairs to assist war veterans in obtaining this type of parcel as being a significant element in the increased demand for small-holdings.

The report also identified a number of potential problems which it was felt could arise if this type of development were allowed to continue

¹ A detailed analysis of subdivisions created under these conditions was not feasible as many of them are now part of the built-up area of Edmonton.

without adequate control (E.D.P.C., 1953-54):

- (1) The necessity for the provision of additional school facilities in rural areas;
- (2) The possibility that random subdivision of cultivated farmland could result in the loss of some of the areas most productive agricultural land.
- (3) The establishment of small-holdings could present a weed problem particularly in cases where the majority of the owner's time is consumed with his employment elsewhere.
- (4) The fact that small-holdings are not synonymous with small farms and that there was little chance that a family could maintain itself on one without some other regular source of income. Dependence in the City or municipality for employment were therefore, unavoidable.

The following questions pertaining to the future development of land for this use were also raised in the report (E.D.P.C., 1953-54):

- (1) What is the economic size of each parcel in each type of development?
- (2) Should there be an upper and lower limit on the number of parcels allowed in a subdivision?
- (3) What is the best design for a small-holding subdivision?

Although the report's recommendations demonstrate little in the way of an in-depth analysis and appear to be based largely on intuitive judgement they did have a decided impact on the future structure of Commission policy. Shortly after the report was released, a committee was appointed to formulate a policy and to design regulations to guide the Commission's staff in the processing of applications to subdivide. In June, 1955, the following recommendations and conclusions were presented (E.D.P.C., 1955-56):

- (1) A small-holding parcel shall not be less than three acres in size nor more than twenty acres in size.

- (2) Small-holding parcels shall be grouped, on the basis of compatibility and soil requirements, into four types:

- (a) cultivating;
- (b) livestock;
- (c) fur farming;
- (d) miscellaneous.

Groups (a), (b), and (c) shall not be mixed into a single subdivision.

- (3) Small-holdings shall be located within approximately ten miles of the perimeter of the metropolitan area.
- (4) Each type of small-holding shall be located on suitable soil.
- (5) Small-holding subdivisions in the open country should contain at least forty but not more than eighty acres.
- (6) There should not be any upper or lower limit to the size of small-holdings on land immediately adjacent to traditional hamlets.
- (7) Tree-cover should be maintained to the greatest possible extent in cottage and country residential subdivisions.

These recommendations were adopted by the Municipal Districts of Stony Plain and Morinville (the M.D.'s of Strathcona and Sturgeon had temporarily withdrawn from the Commission) and were implemented through interim development control by-laws and the Commission's power of subdivision approval.

The regulations proved to be satisfactory in those parts of the planning area that did not experience rapid development; however, it was soon realized that they were deficient in areas in which a considerable concentration of development was taking place. This was particularly evident in Strathcona after it had rejoined the Commission.

In 1956, the Commission's staff studied the problems of country

residential development with the objective of finding a means of accommodating the demand for country residence sites without creating the typical effects of uncontrolled fringe development such as ribbon development along highways, the fragmentation and waste of productive farmland and "disorderly and uneconomic sprawl." The following principles of location and subdivision design emerged out of this study (E.D.P.C., 1957):

- (1) Country residential sites should be provided in groups at scenic locations only in areas accessible by all-weather roads and within convenient commuting distance from the City.²
- (2) Country residential subdivisions should provide for one tier of lots of approximately one acre in size sited on the bank of a ravine or river with access roadways being located at the rear of the lots. These roads should be designed to follow the topography of the land thereby maintaining a rustic quality within the subdivision.
- (3) Building standards should be high; however, considerable freedom should be allowed in matters pertaining to dwelling size, style, and siting on individual lots.

These recommendations were endorsed by the Commission in 1956 and had a considerable effect on development that was occurring at that time. The Commission appears to have made a distinction between two forms of country residential subdivision. One, labeled small-holdings, was thought of as an agricultural use. Under this classification subdivisions were allowed throughout the planning area and were subject to minimal restrictions. The other form of subdivision was considered to be strictly residential. Subdivisions proposed under this classification were quite

²In the metropolitan area of Edmonton the choice area for development was the southwest, on the east and west banks of the North Saskatchewan River.

rigidly controlled and were allowed only in the areas identified on Figure 4.3. An example of the type of subdivision allowed under these regulations is presented in Figure 4.4. The lots in these subdivisions are quite small and when developed closely resemble some of the lower density large lot subdivisions in the City of Edmonton.

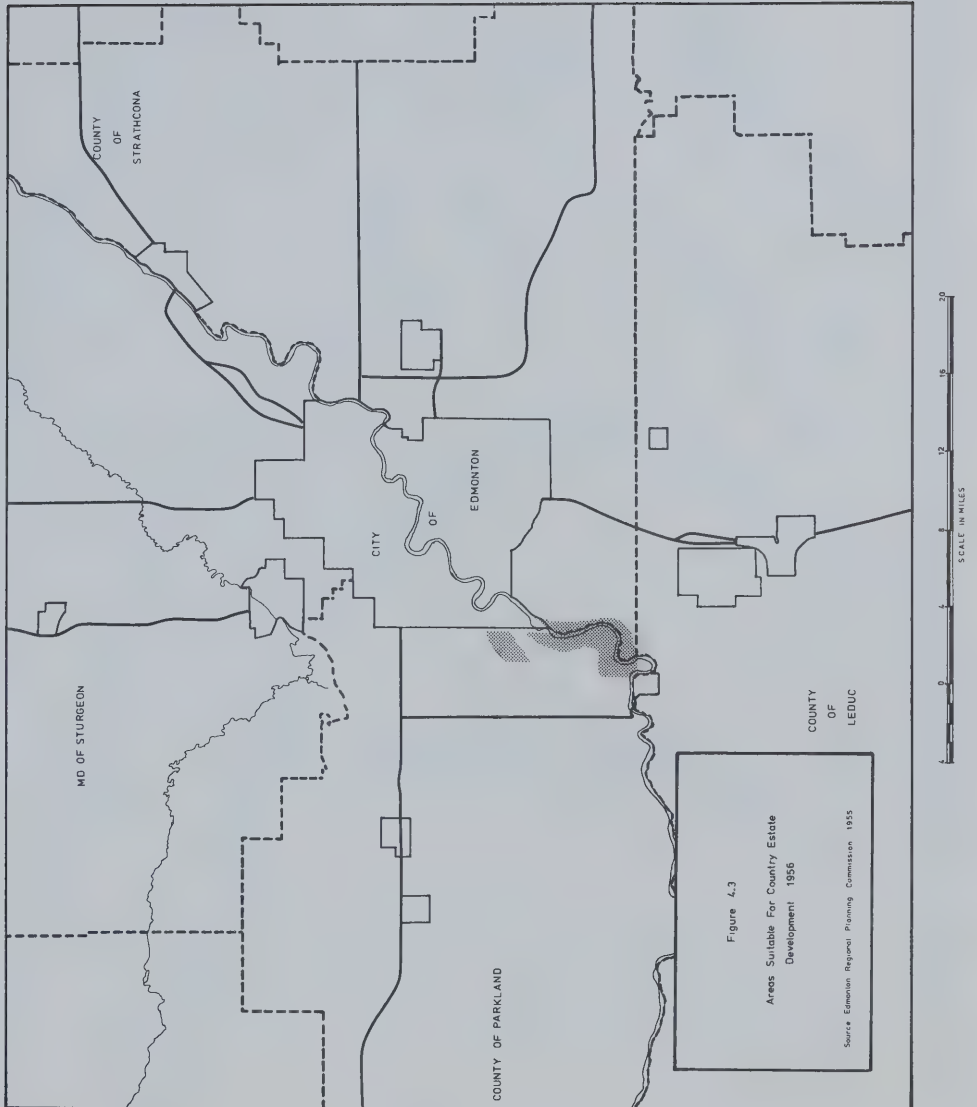
In 1958, the Metropolitan part of the Preliminary Regional Plan was formally adopted by the Commission. The plan has since been amended and revised on four occasions. Initially the plan contained separate land use classifications for country residential uses and small-holdings which reflected a combination of the results and recommendations of the earlier studies and the permitted uses and locations specified in The Subdivision and Transfer Regulation 185/60 which stated that:

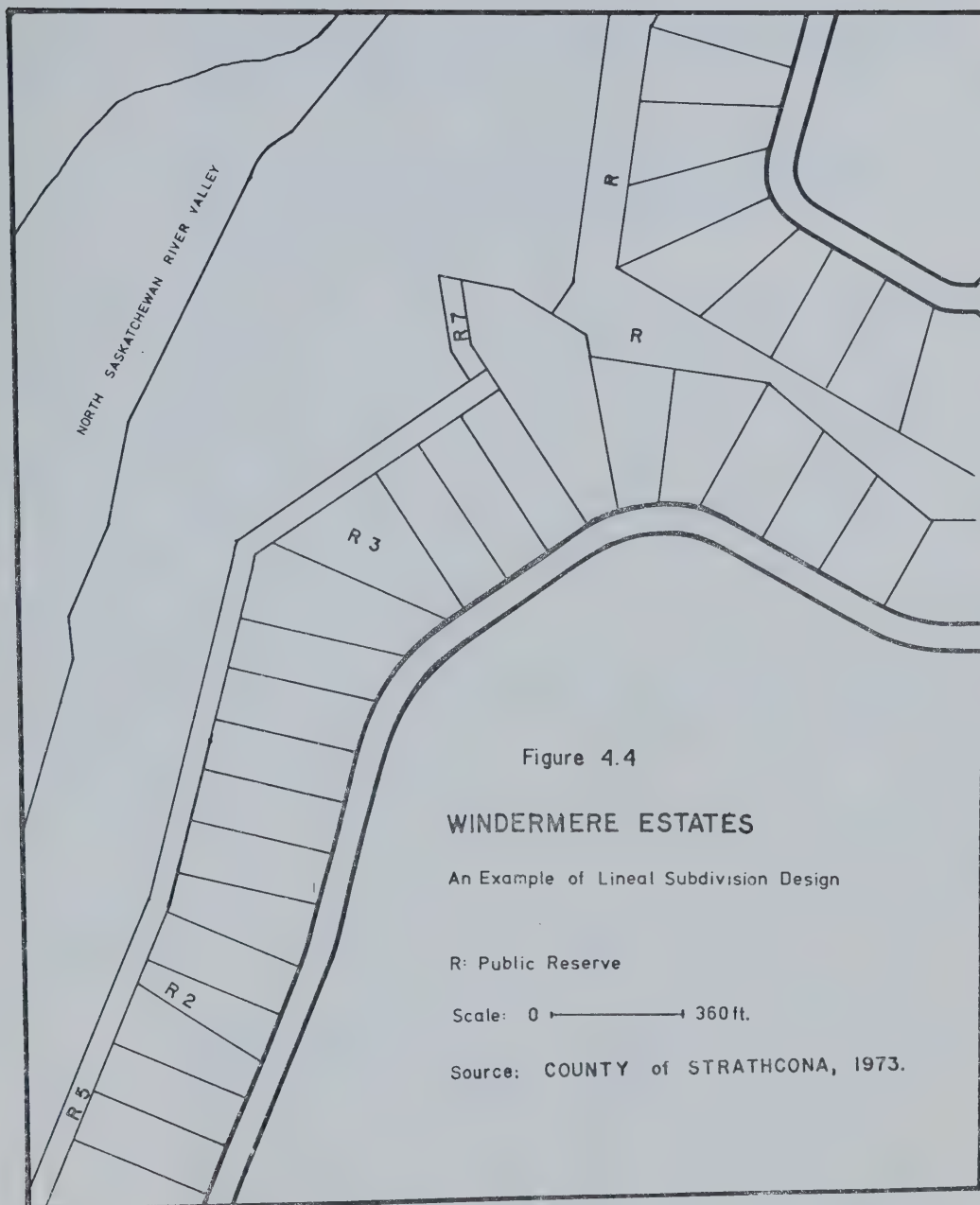
"country residence" use means the use of land in a rural area for groups of permanent dwellings of good construction on large sites.

and

"small-holding" means a parcel of land not included in an urban municipality that is used for the purposes of intensified agriculture .. with residential uses incidental thereto.

When the Regulation was revised in 1967 the two classifications were restructured considerably. The small-holdings category was deleted and was replaced by a sub-class in the country residential category (Alberta Regulation 215/67, The Subdivision and Transfer Regulation). The definition of country residence in the revised Regulation reads as follows:





49(a) rural parcels involving a block of a number of sites⁷ on land having special scenic and locational qualities and on which no intensified agricultural or small-holding pursuits are permitted;

(b) rural parcels involving individual sites up to a maximum of six such sites in every quarter section of land where the predominant use is a rural residence and where minor agricultural and rural pursuits are permitted as subordinate uses.

The restructuring of the categories evidences the fact that the planning authorities realized that the small-holding parcels were in reality being utilized not for agricultural purposes but for predominately residential uses and should be defined as such. When the preliminary regional plan was revised in 1972 it included the restructured categories and labeled them country residence (A) and country residence (B). This delineation was necessary in order to ensure that the plan conformed to all of the terms contained in The Subdivision and Transfer Regulation pertaining to the siting and dimensions of parcels and permitted locations which differ considerably between the two uses.

The Commission's growing awareness of the North Saskatchewan River Valley's potential for recreation was also evident in the 1972 revisions of the plan, which stated (E.R.P.C., 1972(b), p.8):

...that the general purpose of the country residential (A) zone was to provide sites for groups of permanent country dwellings of good construction at scenic locations within convenient commuting distances of Urban Edmonton, in a manner which will not result in urban concentrations and which will be beyond the areas of urban expansion. These sites shall be located along ravines tributary to the North Saskatchewan River Valley and adjacent to the Sturgeon River Valley. The subdivision of land shall be so designed that the parcels created will be separated from the top of the bank of the valley or ravine by either a public roadway or a sufficiently broad public

upland area that will effectively prevent encroachment into the valley or ravine and will maintain public access. Site areas shall not be less than one acre and sites shall be so located that the parcel boundary shall not be closer than 25 feet from the top of the valley bank.

This, however, was considered too restrictive and a further amendment was made to the plan in 1973 (E.R.P.C., 1973(b), p.8). A 'special uses' category was added under which:

country residence (A) parcels may be considered within the river valleys only under exceptional circumstances based on the merits of each proposal and where it has been unanimously agreed by the commission members that the creation of such parcels will not be detrimental to either the use of the river valleys for private recreation purposes or the conservation of the unique natural features of the valleys. The prerequisite for the approval of this exceptional country residence use shall be rezoning of the plan to country residential (A) from metropolitan recreational.

These regulations have been strictly enforced by the Commission. In order for country residential (A) subdivision to be effected, a developer has had to apply to the Commission for an amendment to the plan. In the past few years the majority of these applications have been refused. What subdivision has been allowed has been confined to the banks of the Sturgeon River and the tributaries of the North Saskatchewan. The restricted uses apply only to the area included in the plan; the remainder of the Commission area is not subject to them, though the municipal councils have some authority under interim development control.

Interim Development Control

In the early 1950's interim development control boards were established in the municipalities adjacent to Edmonton so that development could be controlled during the time lapse between the inauguration of the

planning program and the final adoption of a regional plan. The intent of this is exemplified in the following statement from the Town and Rural Planning Act, 1950, Section 12:

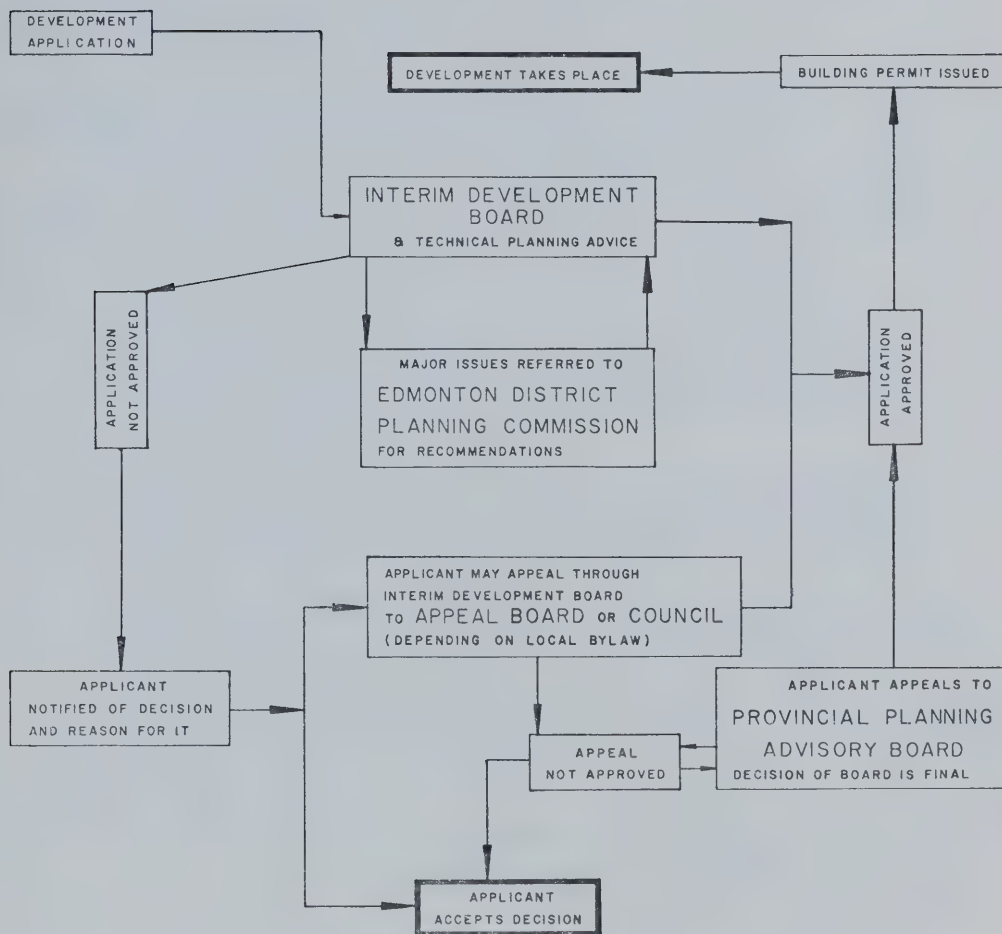
...development will be in harmony with the evolving plan and that an authority will exist that will prevent development which is harmful to the evolving plan.

When development control was put into effect no physical development was allowed to occur within the local government area without the developer obtaining a development permit from the development control board or an authorized officer.³ Under development control, a council is empowered to formulate rules respecting the use of land in specific areas, or any special aspects of specific kinds of development and the manner of their control (The Planning Act, c. 276, R.S.A. 1970, Section 106). The process of development control as it was structured when first implemented is illustrated in Figure 4.5. Essentially, the same process exists today. The municipal authorities in the study have each enacted development control by-laws. A list of development restrictions or regulations implemented by the County of Parkland and the process by which development proposals are implemented is presented in Appendix II.

As was mentioned previously, the other major means of institutional control over land use in the study area is the Edmonton Regional Planning Commission's power of subdivision approval. The Commission may approve applications to subdivide only when the application conforms with

³In the Counties of Parkland, Leduc, and Strathcona, Development Officers have been authorized to handle this function. In Sturgeon it is assumed by the Council or the Municipal Secretary.

Figure 4.5 INTERIM DEVELOPMENT CONTROL; 1953



SOURCE: EDMONTON DISTRICT PLANNING COMMISSION
ANNUAL REPORT, 1952-53.

requirements of The Planning Act and The Subdivision and Transfer Regulation and the provisions of a preliminary regional plan or regional plan that is in effect.

Regulations Pertaining to the Subdivision of Land

The Planning Act. Section 16 of The Planning Act 1970 details those prerequisites which apply to the subdivision of land for any purpose.

Herein it is stated that land shall not be subdivided unless:

- (1) the land, in the opinion of the approving authority is suited to the purpose for which the subdivision is intended and may reasonably be expected to be used for that purpose within a reasonable time after a plan of subdivision is registered;
- (2) the proposed subdivision conforms to any existing general plan, regional plan, development scheme or zoning by-law which will affect the land or adjacent land;
- (3) the proposed subdivision complies in all respects with The Planning Act and The Subdivision and Transfer Regulations and is approved in the manner prescribed by them.

The Subdivision and Transfer Regulation 185/60. The Subdivision and Transfer Regulation has been drafted for the purpose of controlling, regulating, and governing the subdivision of land (The Planning Act, c. 276, R.S.A. 1970, Section 17). These regulations prescribe the procedure to be followed by both the applicant and the approving authority in processing an application for subdivision. The Regulation also lists a set of rules pertaining to the physical dimensions of subdivisions; the location, area, and shape of public reserves; and the locations where subdivisions intended for specific uses are permitted or prohibited (The Subdivision and Transfer Regulation, Alberta Regulation 215/67).

As was the case with The Planning Act, The Subdivision and Transfer Regulation have undergone extensive periodic revision, thus effecting changes in the regulations pertaining to the permitted uses, size, and location of subdivisions intended for country residential use.

The Subdivision and Transfer Regulation 185/60, (1960)

Subdivision for Country Residences

(a) Permitted Locations (51(1), and (2)):

Land may be subdivided for country residence use only within 15 miles of a city or town in a location that is approved by the Director or the approving authority by reason of its being on a hillside or in the near vicinity of a river, lake, ravine, or other site having special scenic and locational qualities.

- (b) Country residence subdivisions shall not be permitted on land which is scheduled under any zoning or land use regulations for other uses or for which in the opinion of the approving authority may be more suitably and economically utilized for other purposes within a reasonable length of time.

Dimensions and Siting of Lots and Parcels (53)

1. In a country residence subdivision, each parcel intended for use as a dwelling site shall have:

- (a) a mean width of not less than 90 feet;
- (b) a mean length of not less than 160 feet;
- (c) an area of not less than one-third acre.

Subdivisions for Small-Holdings

Permitted Locations (55)

Small-holding subdivisions may be made only on land that is situated:

- (a) within 15 miles of the limits of a city, town, or village;
and

- (b) further than three miles from the limit of a city or one mile from the limit of a town or village; and
- (c) not closer than one-half mile to a controlled highway.

Dimensions of Lots or Parcels (58)

- (1) The area of each parcel in a small-holding subdivision shall be not less than three acres nor more than 20 acres.
- (2) The length of a parcel shall not be more than three times its width.

The Subdivision and Transfer Regulation 215/67 (1967).

Subdivision for Country Residences

Permitted Locations

50. Land may be subdivided for country residences only on land that is situated:

- (a) further than two miles from the limit of a city, town, new town, village, or summer village and not closer than one-half mile from a highway; and
- (b) in a location to be approved by the approving authority by reason of it being on a hillside, or in the vicinity of a river, lake or ravine or other site having special scenic and locational qualities; or
- (c) where the soil is marginal, but not on land having prime soil characteristics as determined by the approving authority.

Dimensions and Siting of Parcels

53. In a country residential subdivision, each parcel intended for use

- (a) as classified under clause (a) of section 49, shall have an area of not less than one acre,
- (b) as classified under clause (b) of subsection 49, shall have an area of not less than three acres and not

more than 20 acres.⁴

At the present time (1973) the 1967 revision of the Regulation is in effect, but The Planning Act is currently being re-written and the regulations pursuant to it are sure to change. The Edmonton Regional Planning Commission has, in addition to the regulations contained in the preliminary regional plan and The Subdivision and Transfer Regulation, adopted a general policy toward rural land use in the Commission area (E.R.P.C., 1975).

Rural Land Use Policy: E.R.P.C.

The preservation of good agricultural land. In the Edmonton Region, agriculture has traditionally taken prominence as the major resource industry; therefore, most general Commission policies refer to the conservation of good agricultural land (E.R.P.C., 1975, p.32):

- (1) The Commission aims to ensure that agriculture will remain as a valuable component of the regional economic base.
- (2) The Commission will work within the limits of its duties and powers, to improve the efficiency of agricultural land use.

The Commission's stance is that good agricultural be allocated to agricultural uses and that its conversion to any other land use through

⁴49. Country residential uses are classified as follows:

- (a) rural parcels involving a block of a number of sites on land having special scenic and locational qualities and on which no intensified agricultural or small-holding pursuits are permitted;
- (b) rural parcels involving individual sites up to a maximum of six such sites in every quarter section of land where the pre-dominant use is a rural residence and where minor agricultural and rural pursuits are permitted as subordinate uses.

subdivision must be justified by the developer (E.R.P.C., 1976). In processing subdivision applications which threaten to convert agricultural land to another use the Commission has utilized the A.R.D.A. Canada Land Inventory Soil Capability for Agriculture ratings as a guide in assessing the land's productive capability. Soils with a capability rating of Class 1 or 2 are considered prime agricultural land. Commission policy is that they be used for agricultural purposes only. Land with a soil capability of class 3 is also reserved for agricultural purposes except where special circumstances warrant other uses. Poorer soils, classes 4 through 7, are generally not withheld from development unless the site is not favourable for the proposed use. An exception to this is land in environmentally sensitive areas such as the sand dune area near Devon which has experienced a great deal of development in recent years. Parts of this area, not yet subdivided, may be withheld from development because of environmental concerns (E.R.P.C., 1974(b)). In cases where sites are not suitable for development, Commission policy dictates they be left in their natural state.

Country residential. With the exception of special areas (delimited in part by the Provincial Department of Environment) where above normal concern is given to the protection of the environment and an area's potential for outdoor recreation, Commission policy, although somewhat more specific in certain areas such as permitted uses and the provision of services, simply echoes The Subdivision and Transfer Regulation. In its assessment of applications to subdivide the Commission treats each individual application on its own merit, seemingly independent of all

other development that is or has occurred in the area. Only in cases where the subdivision is to occur within three miles of a town or village does the Commission require the developer to produce an outline plan showing adjacent land uses. This is supposedly done to ensure that the proposed subdivision constitutes the highest and best use of the land for the foreseeable future; however, no guidelines have been constructed for a valid evaluation. It appears as though the Commission does not often question the statements of developers.

Small farms. There is no specification in The Subdivision and Transfer Regulation which pertains to the subdivision of land for small farm use. As a result of development pressure, the Edmonton Regional Planning Commission has created two sub-classes in this category (E.R.P.C., 1975):

1. Small Farm A; comprised of parcels intended for intensive agriculture.
2. Small Farm B; comprised of parcels where the intention is primarily residential with small scale rural pursuits permitted.

There is no specific list of permissible uses for small farms under existing regional policy. Applicants are required to specify the use they intend to make of the land and may be required to provide the Commission with evidence of genuine intent. In the past, uses that have not been purely agricultural have been received sympathetically by the Commission (E.R.P.C., 1975).

Applicants who wish to subdivide land under the Small Farm A category may be required to prove that the proposed use is closely correlated to the suitability of the site. The Commission contends that

these subdivisions are not permitted to affect adversely the continued agricultural use of the rest of the quarter section and may be restricted to isolated locations if the proposed use is obnoxious.

Small Farm B parcels are subject to the same locational restrictions as are country resident (b) parcels. The only real difference between the two is size. The minimum size of Small Farm B parcels has been set at 20 acres (E.R.P.C., 1975). The Commission relies on recommendations from municipalities in setting the maximum size allowable. As a result, the maximum size varies considerably throughout the study area. The specifications set by the different municipalities are as follows (E.R.P.C., 1974):

1. The County of Leduc: The County of Leduc recommends against the subdivision of good agricultural land below any size less than a quarter section. The exceptions to this policy are:
 - (a) if the land is cut off by some physical obstacle or barrier which makes access to it difficult or impossible thus thwarting a viable farm operation;
 - (b) if the applicant can produce evidence that the proposed subdivision constitutes a bona fide agricultural use.
 - (c) the separation is a farmstead.
2. The M.D. of Sturgeon: The M.D. of Sturgeon will permit the subdivision of agricultural land under the following circumstances:
 - (a) parcels may be subdivided to 80 acres in size provided a bona fide agricultural use is proposed;
 - (b) separation of a farmstead.
3. The County of Strathcona: The County of Strathcona will permit the subdivision of good agricultural land under the following circumstances:
 - (a) parcels may be as small as 40 acres;
 - (b) four parcels per quarter section may be permitted;
 - (c) subdivision is allowed where a farmstead is being removed from a quarter section.
4. County of Parkland: The County of Parkland's policy is identical to that of the County of Strathcona.

The policies of the Municipalities and the Commission are contradictory as each sets different minimum sizes. The minimum size set by the Commission is only stringently applied to the area covered by the Preliminary Regional Plan. In all other areas, the setting of minimum parcel size is left to the discretion of the municipalities concerned, provided the 20 acre minimum is preserved. Therefore, the practical minimum size varies considerably throughout the study area.

PART THREE: THE AFFECT OF INSTITUTIONS ON THE PATTERN OF SUBDIVISION

The Supply of Country Residential Parcels

The implementation of the various land use controls described above has had a considerable influence on the number of parcels that have been allowed to be created throughout the study area. Table 4.1 shows that approximately 28 percent of the total number of country residential parcels applied for, in the study area, from 1962 through 1973 have been refused. A further 32 percent have never had a final decision made on them. The majority of these consist of applications which have been withdrawn, held in abeyance pending the completion of a study or plan, or in some cases, approved with stringent development conditions. The most common reasons for the refusal of an application have been failure to conform with the Preliminary Regional Plan; failure to conform with one or more sections of The Subdivision and Transfer Regulation; and cases where the Commission has felt that the proposed subdivisions would constitute the unwarranted fragmentation of good agricultural land. As was mentioned previously, factors pertaining to

over-concentration and over-supply have not figured prominently in the subdivision approval process.

Table 4.1
Application to Subdivide, 1962-1973

Municipality	Parcels Applied for	Parcels Approved	Parcels Refused	Parcels Pending Decision
County of Strathcona	4,286	1,826	1,105	1,355
County of Parkland	4,922	2,129	1,034	1,759
M.D. of Sturgeon	2,236	698	890	648
County of Leduc	1,162	302	540	320
	12,606	4,955	3,569	4,082

Source: Edmonton Regional Planning Commission Annual Reports, 1962 through 1973

The Location of Country Residential Parcels

The Edmonton Regional Planning Commission in its role of a subdivision approval authority, has been successful in not allowing extensive 'ribbon development' to occur along the major highways in the study area. With few exceptions country residential subdivisions has not been allowed within one-half mile of a highway; however, the majority of subdivisions are located within one and one-half miles of a paved road. This has allowed the country resident to maintain good access to the area's major arterials, while at the same time preserving the area's natural or rural environment for the highway traveller. This policy has also eliminated, or at least minimized the need for additional

access points and has helped to maintain highway safety.

The Commission's policy toward country residential (a) subdivisions has also been quite strictly enforced. With few exceptions subdivisions of this type have been restricted to those areas designated suitable in the Preliminary Regional Plan; in particular, the banks of the North Saskatchewan and Sturgeon Rivers and their tributaries. In recent years, the recreational potential of the river vallies has become more appreciated; consequently, applications to subdivide adjacent to them have been more carefully scrutinized, and few have been allowed. Applications to amend the Preliminary Regional Plan so that more areas may be made available for country residential (a) development have for the most part been refused.

Outside of the area covered by the plan, the Commission has refused only those subdivisions which contradict the regulations or established policy. No attempt is made to determine whether or not an over-supply exists or if the land resource is being allocated to its best use. Pressure for subdivision has extended far into the country-side and has greatly inflated the value of rural real estate in the Edmonton area (Alberta Agriculture, 1971-74). This will undoubtedly have an effect on the agricultural industry which must now compete with land developers.

The Distribution of Parcel Size

Table 4.2 which shows the number of parcels created in five different size categories reflects the influence that "minimum parcel size" regulations have had on the proportion of parcels created in the

Table 4.2
Distribution of Parcel Size

Municipality	0.00 to 2.99 Acres			3.00 to 4.99 Acres			5.00 to 9.99 Acres		
	Parcels	Dwellings	Percent Occupied	Parcels	Dwellings	Percent Occupied	Parcels	Dwellings	Percent Occupied
County of Strathcona	279	164	58.78	1,126	574	50.93	127	65	51.18
County of Parkland	188	66	35.11	1,050	284	27.05	286	63	22.03
County of Leduc	31	19	61.29	104	44	42.30	77	28	36.36
M.D. of Sturgeon	194	86	44.32	211	78	36.97	60	32	53.30
Total Study Area	692	335	48.41	2,491	980	39.34	550	188	34.18
	10.00 to 19.99 Acres			Total Country Residential			20 to 40 Acre Small Farms		
	Parcels	Dwellings	Percent Occupied	Parcels	Dwellings	Percent Occupied	Parcels	Dwellings	Percent Occupied
County of Strathcona	254	158	62.20	1,786	961	53.80	796	424	53.26
County of Parkland	189	59	31.22	1,713	472	27.55	316	71	22.46
County of Leduc	65	25	38.46	382	153	40.05	105	37	35.24
M.D. of Sturgeon	45	22	48.89	510	218	42.74	86	24	27.90
Total Study Area	553	264	47.73	4,391	1,804	41.08	1,303	556	42.67

Source: Registered Plans of Subdivision and Tax Assessment Forms, 1973.

different categories. Over half (57 percent) of the total number of country residential parcels subdivided were between 3.00 and 4.99 acres in size (Table 4.2). Of these, the majority were slightly over three acres, the minimum allowable for country residential parcels, and were included in cluster type subdivisions incorporating from 20 to 45 parcels. It appears from Table 4.3 that the highest economic return is generated from parcels less than three acres in size. Although parcels in this category are all located near the city and in areas endowed with particularly pleasing aesthetic qualities, a factor which undoubtedly accounts for the high prices paid for these one acre parcels, the fact remains that an inverse relationship consistently exists between the average value per acre and parcel size. It is to the developer's advantage to subdivide to the minimum size; not only is his return per acre greater, but he is also able to create a larger number of parcels per quarter section.

It is apparent that the selection of parcel size is largely determined not by the demand for three acre parcels on the part of the prospective country residents, but by the subdivision regulations which dictate this as the minimum allowable size. The price differential and high occupancy rate suggests that the demand for smaller parcels than the three acre minimum is very strong. However, it is noted that these two measures may be strongly influenced by the restricted supply of parcels in that size category. The total area of land acceptable for this type of subdivision is quite limited, a fact that accounts for the lower number of parcels of this type created.

The tendency for developers to subdivide land to the minimum acreage allowable is a result of economics. The return per acre increases as the size of the parcel decreases. This is illustrated in Table 4.3 which shows the average value per acre for a random sample of 121 country residential parcels in the Counties of Strathcona and Leduc, and the M.D. of Sturgeon.

Table 4.3

Average Value per Acre by Parcel Size (Acres)

Size (Acres)	Number of Parcels	Mean Value per Acre (Dollars)*	Range (Dollars)
0- 2.99	18	6,673.93	1,550.00-16,363.63
3- 4.99	69	2,273.75	629.00- 5,500.00
5- 9.99	12	1,610.00	400.00- 2,505.00
10-20.00	22	1,185.54	300.00- 2,497.00
Total	121	2,600.00	300.00-16,363.63

*The values presented in this table were derived from the assurance fund value recorded at the time of the last change of title. They do not represent current market values.

Source: Alberta Land Titles Office, 1973

The size category with the second highest frequency was the 0.00 to 2.99 acre grouping which included those parcels subdivided for country residential (a) purposes. These parcels tend to be slightly over one acre in size and are also grouped into fairly dense clustered developments; however, these usually take a lineal form and run parallel

Table 4.4

Subdivided Quarter Sections by C.L.I. Classification of
Soil Capability for Agriculture

	Class 1			Class 2			Class 3			Class 4+		
	% M	% T		% M	% T		% M	% T		% M	% T	
Country of												
Strathcona												
pre 1965	10	4.35		9	3.91		14	6.09		32	13.91	
1965 to 1970	11	4.78		15	6.52		19	8.26		55	23.91	
post 1970	6	2.60		9	3.91		13	5.65		37	16.09	
Sub Total	27	11.73	6.02	33	14.34	7.37	46	19.99	10.27	124	53.90 27.68	
County of												
Parkland												
pre 1965	4	2.86		1	.71		5	3.57		13	9.29	
1965 to 1970	4	2.86		4	2.86		2	1.43		46	32.86	
post 1970	6	4.29		8	5.71		4	2.86		43	30.71	
Sub Total	14	10.01	3.12	13	9.28	.90	11	7.86	2.46	102	72.85 22.76	
M.D. of												
Sturgeon												
pre 1965	4	9.30		4	9.30		3	6.98		1	2.33	
1965 to 1970	8	18.60		4	9.30		2	4.65		4	9.30	
post 1970	5	11.62		2	4.65					6	13.95	
Sub Total	17	39.52	3.80	10	23.25	2.23	5	11.63	1.12	11	25.58 2.45	
County of Leduc												
pre 1965	2	5.71		2	5.71		1	2.86		2	5.71	
1965 to 1970	4	11.43		4	11.43		4	11.43		6	17.14	
post 1970	1	2.86		3	8.57					6	17.14	
Sub Total	7	20.00	1.56	9	25.71	2.01	5	14.29	1.11	14	39.99 3.13	
TOTAL	65		14.50	65	14.51		67	14.96		251	56.02	

Source: Canada Land Inventory Capability Maps, Edmonton 83H, Wabamun 83J

% M = Percentage of the Municipal total-Quarters subdivided

% T = Percentage of the total Study Area-Quarters subdivided

to a river valley or ravine. These parcels have the highest rate of occupancy, over all the other size categories (Table 4.2). This may be a result of the regulations that restrict the use of these parcels to solely residential purposes, and the fact that they are allowed only on particularly scenic locations.

The term "scenic location" is interpreted very narrowly by the Regional Planning Commission as being near the banks of river valleys or tributary ravines. The reasons for this stem from the supposition that fairly high parcel densities can be fitted into strips along ravines yet still have a rural atmosphere with open environments on both sides. The small parcel size of these subdivisions and the manner in which they are laid-out, results in a form of fairly dense development that appears little different from lower density urban subdivisions common in the most exclusive neighbourhoods of Edmonton.

The Subdivision of Agricultural Land

Table 4.4 indicates the number of quarter sections in the study area that have been subdivided for country residential purposes by municipality and time period, cross-classified by agricultural capability. The Canada Land Inventory classifications have been generalized into four groupings. Class 1 soils have no significant limitations for crop production. Class 2 soils have moderate limitations that restrict the range of crops or require moderate conservation practices. Class 3 soils have moderately severe limitations that restrict the range of crops or require moderate conservation practices. Class 4 or poorer soils have severe or very severe limitations that restrict the

range of crops or require special conservation practices or both. Many of these soils are suitable only for the production of perennial forage crops as improvement practices are not feasible (Canada Land Inventory 1967). Of the 448 subdivided quarter sections included in Table 4.4, 65 are located wholly or partially on class 1 land, 65 are located on class 2, 67 on class 3, and 251 on land with a lower agricultural potential. Forty-four percent of the total land subdivided has a high capability for agricultural production.

The amount of land in these three categories that has been subdivided for country residential purposes has steadily diminished through time. Prior to 1965, over 55 percent of the land subdivided was class 1 through 3. This reflected the premise that was made at that time, that these subdivisions would be utilized as small agricultural enterprises. In the 1965 to 1970 period the proportion had dropped to 42 percent. By 1973 only 38 percent was in these categories, the greater part of which was class 3. Much of this reduction can be attributed to the Edmonton Regional Planning Commission's policy of refusing to approve applications to subdivide land with good agricultural potential.

Since the enactment of this policy the majority of subdivisions that have been permitted on good agricultural land have been made under the guise of the Commission's small farm classification. The exceptions to this were a number of country residential (a) subdivisions created adjacent to the Sturgeon River, in the M.D. of Sturgeon, and some country residential (b) subdivisions in the County of Leduc. Neither of

these municipalities possesses much land in the poorer categories within reasonable commuting distance of Edmonton. Consequently, much of the limited amount of subdivision in the two municipalities has been on good agricultural land.

A large number of parcels have been subdivided throughout the study area under the small farm classification that are not being used for commercial agricultural production. By 1973, 1303 parcels of this nature had been registered; 796 in the County of Strathcona; 316 in the County of Parkland; 105 in the County of Leduc; and 86 in the M.D. of Sturgeon. Most of these parcels are located in areas with low soil capability ratings for agriculture, but a number of them have been allowed in areas of class 1 and 2 land. Of the four municipalities in the study area, the County of Leduc and the M.D. of Sturgeon have been the most successful in holding the subdivision of high quality land to a minimum. The Counties of Parkland and Strathcona appear to be much more lax in their approach to this problem.

The small farm categories have created a number of problems for the Edmonton Regional Planning Commission. In many cases, applications for subdivision have served only to fragment large agricultural holdings into basically residential parcels, nonproductive hobby-farms, or speculative holdings. In other cases, the initial subdivision application has been genuine, but the initial producer has since sold the parcel to someone who has not been interested in farming commercially (E.R.P.C., 1975). Because of this apparent misuse of the category, especially the small farm (a) sub-class, few subdivisions of this type have been allowed

by the Commission in recent years.

The Commission has been frustrated to some extent, in its efforts to control this type of development by the Provincial Planning Board which has approved applications after the Regional Planning Commission had refused them on the basis of "fragmentation of good agricultural land." The greatest problems that both bodies experience when handling applications of this nature are (E.R.C.P., 1975, p.20):

1. to relate the nature of the intended enterprise to land capability and the availability of services.
2. to relate the above factors to parcel size.
3. to establish whether or not an applicant is genuine in his intentions to make productive use of the land.

It is this last problem which is the most crucial, for once the subdivision application is approved and the parcels registered there is no way that planning authorities or municipal governments can ensure that it is used for the purpose under which it was subdivided - you can not force someone to farm land in Alberta.

THE IMPACT OF OTHER PHYSICAL FACTORS

Water and Sewage Disposal

In areas of country residential growth, the question of preservation of water supply and regulated waste disposal becomes critical and very complex. Problems often originate after development has occurred, arising when the potential water source of an area is being contaminated by its use for waste disposal. Increased population densities increase the use of sewage and waste disposal systems which in turn increase the danger of contamination of the water supply. This is particularly true in areas where large numbers of livestock, such as horses, are kept

in close proximity to residences.

Before development is allowed to occur there is a need for detailed knowledge of the surface or sub-surface geology and water supply conditions. After this information has been collected the appropriate waste disposal systems should be determined and regulations applied. Unfortunately, the detailed information required for this type of approach in the Edmonton area is not available on an area-wide basis.

Local and regional differences exist throughout the study area in terms of groundwater supply. While an ample supply of potable groundwater exists it varies considerably with respect to both quality and quantity.⁴ In general, the area in the County of Parkland subject to subdivision has an ample supply of groundwater for residential purposes (Alberta Land Use Forum, 1974, p.47). This is also true of the County of Strathcona and the M.D. of Sturgeon. However, great variations exist in the quality of the water, with high mineral contents often making the water, although potable, not palatable. The supply of groundwater in the County of Leduc is intermittent with some areas experiencing high yields, while in others, yields are very low.

The available information on groundwater supply is not very accurate or complete. The Department of Environment has not been able to use adequate data to assess yields in many areas, thus even in parts

⁴General information on the sand and gravel deposits and bedrock topography of the Edmonton district is presented in The Research Council of Alberta Report 66-3, Bedrock Topography and Surficial Aquifers of the Edmonton District, Alberta, by V. A. Carlson, 1967. This report indicates a number of areas offering good groundwater potential.

of the study area where relatively high yields are indicated, inaccuracies pertaining to the depth of the water table and rates of discharge and recharge capability are prevalent (E.R.P.C., 1972, p.10).

At the present time the Edmonton Regional Planning Commission requires that country residential developments be entirely self-sufficient in terms of water supply and waste disposal. However, due to the low quality of groundwater available in parts of the study area a relatively large number of country residents have expressed a desire for a public water and sewage disposal system. Requests of this nature have occurred in the County of Strathcona near Sherwood Park (E.R.P.C., 1972, p.9). However, due to the low density and the amount of undeveloped land in these subdivisions, these services would be extremely costly to provide.

Only in recent years has the Planning Commission required that developers submit documented proof of an adequate water supply prior to subdivision approval. Prior to this, no documentation was needed, a practice that resulted in the approval of subdivision in areas where an adequate supply of groundwater did not exist. As a result, the residents have had to install tanks and have water hauled to them. Under present Commission policy, when a water analysis is required and reveals a poor quality or supply, the Commission will refuse the application or approve it on the condition that prospective buyers are made aware of the situation prior to purchase. If it wished, the Commission could require the developer to provide water and sewage systems to their subdivisions as conditions of approval, but to date it has not chosen

to do so.

The availability of groundwater has had only a minimal effect on the pattern of distribution of country residential subdivisions. This has been changing in recent years as both the Planning Commission and the Department of Environment have begun to be more stringent in applying regulations pertaining to this aspect of development.

Contamination problems. A great many factors influence the degree to which a water supply may become contaminated. Among them are soil characteristics, the depth of the water table, and the source of contaminants.

In areas where sand aquifers are near the surface and not confined by a relatively impermeable layer, such as that found in the sand dune area in the County of Parkland, seepage from the surface is direct and swift; thus, there is an increased likelihood that shallow surface wells may be affected with sewage chemicals and bacterial contamination. This is especially true where the water table is recharged through the direct seepage of rainwater. Contamination is less likely to occur in areas where a clay layer is extensive and continuous and forms a relatively impermeable layer. In these cases, the recharge from the surface is indirect and takes extended periods of time.

The unknown factor is the threshold level of the water table, the point at which the contaminants pollute the water supply so much that it becomes unusable. Once the aquifer is polluted, it is a difficult and lengthy procedure to decontaminate it. To date, polluted water tables have not been a problem in the Edmonton area, but the potential

does exist if development continues at its rapid pace.

Lands with High Recreational and Wildlife Potential

Proximity to recreation lands and to some extent wildlife habitat are factors which have proven to attract people to specific rural areas. The increased population density which results may have a detrimental effect on the environmental attributes which attracted the people initially. Consequently, comment should be made on the propensity for these environmentally sensitive areas to be subject to country residential development.

The recreational quality of the land within the study area is limited as Canada Land Inventory ratings are low throughout the entire area. The data reveal that the more significant recreational lands are along the river banks and around a few of the region's larger lakes, but even these are rated as only moderate. The policy of the Edmonton Regional Planning Commission of reserving the North Saskatchewan River valley for recreational purposes has limited the amount of subdivision that has occurred along its banks. It is, therefore, evident that to date only a limited amount of potential public recreational land has been subdivided for country residential purposes.

A strong tendency exists for country residential development to occur in areas of high capability for the production of waterfowl. The two major areas of extensive subdivision activity, the sand dune area in the County of Parkland, and the Cooking Lake Moraine in the County of Strathcona are both areas of high rating. It is evident that the same characteristics that make these areas prime nesting grounds,

namely undulating terrain interspaced with hundreds of small lakes, ponds, and sloughs also make them attractive for country residential development.

Chapter 5

THE COUNTRY RESIDENTS

The objectives of this chapter are:

- (1) To determine the demographic and socio-economic characteristics of the country residential population.
- (2) To determine differences which may exist between the country residential population and that of:
 - (a) the City of Edmonton;
 - (b) smaller urban centres in the study area;
 - (c) the rural farm population of the study area.
- (3) To isolate a set of factors which are important in motivating a household to leave its former place of residence and relocate in a rural setting.
- (4) To determine the 'search' procedure utilized by the country residential population in relocating to a country residence.
- (5) To determine what social, economic, and environmental factors are considered important in the selection of a suitable country residential site.

POPULATIONS SELECTED FOR COMPARISON

The data used to derive the characteristics of the country residential population were obtained through the questionnaire survey described in Chapter 2. Where possible these characteristics were compared with those of selected rural and urban centres in the study area so that attributes peculiar to the sample population could be

readily identified. The centres chosen for comparison purposes were the City of Edmonton; the towns of St. Albert; Spruce Grove, Morinville, and Gibbons; the hamlet of Sherwood Park; and the Municipal District of Sturgeon. The following rationale was used in the selection of the populations of these centres for comparison purposes.

The City of Edmonton

The City of Edmonton was selected because it is the major urban centre in the region and is generally regarded as the former place of residence for the majority of the population. One of the major objectives of this study was to determine if any particular segments of Edmonton's population are attracted to a periurban lifestyle.

The Smaller Urban Centres

The towns of St. Albert, Spruce Grove, Morinville, and Gibbons, and the hamlet of Sherwood Park were selected because the majority of region's population growth, exclusive of Edmonton, from 1961 through 1971 was concentrated in these centres. They differ considerably in terms of their population size, rates of growth and location relative to Edmonton. Table 5.1 illustrates the first two; the last is illustrated in Figure 5.1. These centres represent the urban alternative as a place of residence, outside of the central city, in the study area. By comparing the characteristics of the populations of these centres to those of the country residents a further differentiation of the peri-urban population's characteristics is made possible.

Table 5.1

Population and Rate of Growth
of Selected Centres

Centre	Population 1961	Population 1971	Absolute Difference	Relative Difference (Percent)
<u>Towns</u>				
St. Albert ¹	4,059	11,800	+ 7,741	+191
Spruce Grove ¹	465	3,029	+ 2,564	+551
Gibbons ¹	192	551	+ 359	+187
Morinville ¹	935	1,475	+ 540	+ 58
<u>Hamlet</u>				
Sherwood Park ²	2,923	14,282	+11,359	+389

Source: ¹ Statistics Canada, Federal Census, 1961, 1971

² E.R.P.C. Annual Reports

The Municipal District of Sturgeon

The rural Municipal District of Sturgeon was selected to differentiate the population characteristics of a predominately rural farm area from those of the rural nonfarm, periurban population. Sturgeon was given preference over Strathcona, Parkland, and Leduc because it was the only predominately rural municipality included in the Census Metropolitan Area of Edmonton in 1971 (see Figure 5.1). The County of Strathcona was rejected because the available data were presented in aggregate form and did not separate the rural areas of the county from the hamlet of Sherwood Park. Furthermore, because of the large concentration of country residential subdivisions in Strathcona, it could

Table 5.2
Distribution of Families by Age of Head

Age Category	Country Residential (1971) 1	City of Edmonton (1971) 2	Town of St. Albert (1971) 2	Town of Morinville (1971) 2	Hamlet of Sherwood Park (1971) 2	M.D. of Sturgeon 90 (1971) 2	Town of Gibbons (1971) 2	Town of Spruce Grove (1971) 2
Less than 25 years	08 5%	10,085 10%	95 41%	30 9%	200 6%	100 4%	10 8%	90 10%
25 to 34 years	65 43	27,310 26	740 28	90 28	1,525 46	510 23	55 48	410 44
35 to 44 years	49 32	25,665 24	1,040 40	85 26	990 31	635 29	25 19	195 21
45 to 54 years	22 15	20,335 19	470 18	50 15	405 12	470 21	15 12	100 11
55 to 64 years	06 4	12,810 12	175 7	25 8	130 4	270 12	15 12	95 10
65 years and over	01 1	9,205 9	75 3	45 14	45 1	240 11	10 8	50 5
Total Number of Families	151 100%	105,430 100%	2,595 100%	325 100%	3,295 100%	2,225 100%	130 100%	940 100%

Sources: Country Residential Questionnaire, 1973
Statistics Canada, 1971, Federal Census

not be considered a predominately rural county; conversely, the country residential population of the Municipal District of Sturgeon was very small in 1971 and represented only a small fraction of the total.

CHARACTERISTICS OF THE COUNTRY RESIDENTIAL POPULATION

Families: by Age of Head

The distribution of family heads by age for the sample and comparison populations is presented in Table 5.2. In terms of this variable the country residential population is dominated by families with relatively young heads (48 percent under 35 years of age), while older families are considerably under-represented. A considerable difference is evidenced between the sample population and that of Edmonton. The differences between the country residential population and the rapidly growing smaller urban centres are not as noticeable. In particular, the distribution in terms of this variable is very similar to that of Sherwood Park. Gibbons and Spruce Grove are also similar, especially in the 25 to 34 year age category, though substantial differences are apparent in the older categories. St. Albert shows the greatest differences because of its marked concentration of household heads in the 35 to 44 year age category, and a relative under-representation in the younger groups. One plausible explanation for this apparent reversal is that St. Albert was the first community on Edmonton's periphery to experience rapid urbanization and remain

autonomous from the City.¹ It is quite conceivable that the majority of families moving to the community in the early 1960s had family heads in the 25 to 34 year age group, thus accounting for the heavy concentration in the 35 to 44 year age group some 10 years later.

It can be concluded from the information presented in Table 5.2 that the country residential population is considerably younger than that of the City of Edmonton, the older towns such as Gibbons and Morinville that have not yet experienced commuter growth, and the Municipal District of Sturgeon. At the same time, the youngest and oldest age groups of family heads are under-represented in the sample population. When compared with the rapidly growing urban centres such as St. Albert, Sherwood Park, and Spruce Grove, it is evident that essentially the same groups (as defined by the age of family head) are moving to them as are moving to country residences. The similarity of Sherwood Park is especially significant because it has experienced the same rate of population growth as the country residential area, and neither had any significant resident population prior to 1955.

An important consideration with respect to this characteristics of the population is its impact on future family mobility. The length of occupancy within a specific dwelling unit rises sharply as the incumbent approaches the 25 to 44 year age group (Kalbach and McVey, 1971). Consequently, as the population ages, it will tend to be relatively immobile as groups with high propensities to move are conspicuous

¹From 1956 to 1966 St. Albert's population increased 638 percent (Statistics Canada).

by their absence in the country residential population. Due to the recent adjustment to housing needs made by the sample population (see Table 5.3), the turn-over rate of developed country residential parcels is likely to be quite low for several years. If this holds true, any increase in demand will have to be met by increasing the number of developed lots as very little of the existing housing stock would be available for resale.

Table 5.3
Families by Length of Residence

Category	Absolute Frequency	Relative Frequency (Percent)	Cumulative Frequency (Percent)
Less than 1 year	28	18.5	18.5
1 through 2 years	63	41.8	60.3
3 through 5 years	29	19.2	79.5
6 through 10 years	19	12.6	92.1
Greater than 10 years	12	7.9	100.0
Total	151	100.0	100.0
Mean 3.41 years	Mode 1-2 years	Range: 19 years	

Source: Country Residential Survey, 1973.

Families: by Number and Age of Children

The distribution of families by number and age of children in the country residential population is compared with that of the comparison populations in Tables 5.4 and 5.5. Several basic differences are

Table 5.4
Distribution of Families by Number of Children

Number of Children	Country Residential (1973) ¹	City of Edmonton (1971) ²	Town of St. Albert (1971) ²	Town of Morinville (1971) ²	Hamlet of Sherwood Park (1971) ²	Town of Spruce Grove (1971) ²	M.D. of Sturgeon 90 (1971) ²	Town of Gibbons (1971) ²
No children	8 9.00%	31,180 30.00%	380 15.00%	70 21.00%	455 14.00%	195 22.00%	500 23.00%	35 25.00%
1 child	15 17.00%	22,740 22.00%	425 16.00%	50 15.00%	605 19.00%	185 21.00%	340 16.00%	25 18.00%
2 children	29 34.00%	23,875 21.00%	670 26.00%	75 23.00%	1,045 28.00%	250 23.00%	500 23.00%	40 29.00%
3 and 4 children	27 31.00%	22,512 5.00%	875 34.00%	90 27.00%	925 28.00%	260 23.00%	630 28.00%	20 21.00%
5 children and over	7 8.00%	5,125 5.00%	240 9.00%	45 14.00%	740 7.00%	55 6.00%	245 11.00%	10 7.00%
Total Number of Families	86 100.00%	105,432 100.00%	2,590 100.00%	330 100.00%	3,260 100.00%	895 100.00%	2,215 100.00%	140 100.00%

¹Source: Country Residential Questionnaire, 1973.

²Source: Statistics Canada, 1971 Federal Census

Table 5.5
Distribution of Families by Age of Children

Age Category	Country Residential (1973) ¹	City of Edmonton (1971) ²	Town of St. Albert (1971)	Town of Morinville (1971) ²	Hamlet of Sherwood Park (1971) ²	Town of Gibbons (1971) ²	Town of Spruce Grove (1971) ²	M.D. of Sturgeon (1971) ²
Less than 6 years	36 18.00%	47,625 27.00%	1,495 24.00%	220 29.00%	2,480 35.00%	95 37.00%	585 42.00%	1,175 24.00%
6 to 14 years	115 58.00%	81,460 47.00%	3,375 55.00%	385 51.00%	2,580 50.00%	125 49.00%	655 47.00%	2,490 51.00%
15 to 18 years	25 13.00%	29,575 17.00%	900 20.00%	115 15.00%	795 11.00%	25 10.00%	110 8.00%	925 19.00%
18 years and over	23 11.00%	16,005 9.00%	325 5.00%	30 4.00%	265 4.00%	10 4.00%	40 3.00%	310 6.00%
	200 100.00%	174,655 100.00%	6,095 100.00%	750 100.00%	7,120 100.00%	255 100.00%	1,390 100.00%	4,900 100.00%
Average number of children per family	2.4	1.7	2.4	2.3	2.2	1.9	1.8	2.2
Average family size	4.4	3.6	4.3	4.3	4.2	3.8	3.8	4.2

¹Source: Country Residential Questionnaire, 1973

²Source: Statistics Canada, 1971 Federal Census

Table 5.6

Distribution of Sample Population by Age
(Sample Population: Country Residents)

Age Group (years)	Frequency (# of Individuals)	% of Total	
Less than 6	36	6.69	} 46.29
6 to 14	115	21.37	
15 to 18	25	4.64	
19 to 24	73	13.59	
25 to 34	162	30.11	} 53.71
35 to 44	81	15.06	
45 to 54	32	5.95	
55 to 64	10	1.85	
65 plus	4	0.74	
TOTAL	538	100.00	

Source: Country Residential Questionnaire, 1973.

Table 5.7

Distribution of Sample Population by Age
City of Edmonton and Province of Alberta

Age group (years)	% of Total Population (City of Edmonton)	% of Total Population (Province of Alberta)
0 to 4	9.1	9.3
5 to 9	10.4	11.1
10 to 14	10.3	11.3
15 to 19	9.7	9.9
20 to 24	10.9	8.7
25 plus	49.6	49.7
TOTAL	100.0	100.0

Source: Alberta Land Use Forum, 1974.

evidenced.

First, relative to all other centres the country residential population has a very low percentage of families with no children. This is particularly apparent when comparisons are made between the sample population and the City of Edmonton. Differences between the other populations and the sample are not as great.

Second, the tables reveal that families residing in country residences are slightly larger than is characteristic throughout the study area in terms of both variables. With the exception of Edmonton, the differences are only slight and cannot be considered significant.

Third, when compared with the city, the country residential population is considerably under-represented in terms of families with preschool age children. This difference is even more pronounced when comparisons are made with the other comparison populations. This along with the fact that the sample population is over-represented in the 6 to 14 year grouping, leads to the conclusion that families tend to move to country residences as or shortly after their children reach school age. This does not appear to be the case in the rapidly growing smaller urban centres, especially Spruce Grove and Sherwood Park, where large concentrations of preschool children are evident. These characteristics are also evident in Table 5.6 and 5.7 which facilitate comparison to be made between the sample population and that of the Province of Alberta. Although the age categories used in the two tables are not directly comparable, it is evident that not only does the sample population exhibit a low concentration in the preschool

category, but the population aged 25 years and over is considerably greater than that of the province as a whole.

On the basis of the information presented above, it can be concluded that families located on country residences are in general slightly larger than the average for the study area. The family heads appear to be generally younger than their urban or rural counterparts and do not move to a country residence until their offspring are of school age or slightly older.

Families: By Level of Income

When compared to the other populations, the distribution of the sample population by the level of family income is skewed upward (see Table 5.8). Of particular concern is the lack of country residential families reporting incomes of less than \$5,000.00 per annum and the relatively high proportion of families reporting incomes in excess of \$15,000.00 per annum.² The distribution in the other categories showed no significant variation. Unfortunately, because of census formats, no statistics were available to facilitate comparisons with Sherwood Park and Spruce Grove.

Table 5.9, a cross-tabulation of the age of family heads by income

²Data for the country residential population is that of 1973 while that for the other areas is 1971. Money incomes for Edmonton rose an average of \$900.00 in the 1971-1973 interval. The distribution illustrated in Table 5.9 is not totally misrepresentative thus, comparisons made are valid.

Table 5.8
Distribution of Families By Level of Income

Income Category	Country Residential (1973) ¹	City of Edmonton (1971) ²	Town of St. Albert (1971) ²	Town of Morinville (1971) ²	Hamlet of Sherwood Park (1971) ²	Town of Spruce Grove (1971) ²	M.D. of Sturgeon (1971) ²	Town of Gibbons (1971) ²						
Under \$5,000	--	19,290	16.30%	190	7.36%	115	34.84%	NA	NA	660	30.07%	35	21.88%	
\$5,000 to \$9,999	37	24.70%	43,610	36.86%	790	30.62%	150	45.45%	NA	NA	940	42.84%	70	43.75%
\$10,000 to \$14,999	54	36.00%	35,380	29.90%	1,040	40.13%	55	16.66%	NA	NA	415	18.90%	35	21.86%
\$15,000 and over	59	39.30%	20,045	16.94%	560	21.70%	10	3.03%	NA	NA	180	8.20%	20	12.50%
Total Number of Families	150	100.00%	118,325	100.00%	2,580	100.00%	330	100.00%	NA	NA	2,195	100.00%	160	100.00%

NA - Data Unavailable

¹Source: Country Residential Questionnaire, 1973.

²Source: Statistics Canada, 1971 Federal Census.

Table 5.9

Crosstabulation: Age of Family Head by Family Income

Income Group (\$)		Age of Family Head (Years)						Row Total
		Less than 25	25-34	35-44	45-54	55-64	65 +	
5,000 to 9,999	1	2.0	11.0	15.0	7.0	2.0	0.0	
	2	25.0	16.0	30.6	33.3	33.3	0.0	37.0
	3	5.4	29.7	40.5	18.7	5.4	0.0	24.7
	4	1.3	7.3	10.	4.7	1.3	0.0	
10,000 to 14,999	1	2.0	32.0	13.0	5.0	2.0	0.0	
	2	25.0	49.2	26.5	23.8	33.3	0.0	54.0
	3	3.7	59.3	24.1	9.3	3.7	0.0	76.0
	4	1.3	21.3	8.7	3.3	1.3	0.0	
15,000 plus	1	7.0	22.0	21.0	9.0	2.0	0.1	
	2	50.0	33.2	42.9	42.9	33.3	100.0	59.0
	3	6.8	37.3	35.6	15.3	3.4	1.7	39.3
	4	2.7	14.7	14.0	6.0	1.3	0.7	
Column		8.0	65.0	49.0	21.0	6.0	1.0	150.0
Total		5.3	43.3	32.7	14.0	4.0	0.7	100.0

1=Absolute Frequency

3=Row Percentage

2=Column percentage

4=Total percentage

Source: Country Residential Questionnaire, 1973.

reveals that no significant relationship existed between the two variables. The distribution is quite even indicating that all levels of income are present in every age category to approximately the same extent.

Families: By Education of Head of Household

The level of education attained by household heads in the sample population is presented in Table 5.9. Unfortunately, comparable data for the other populations is not available. In general, the family heads of the sample population are well educated with 22 percent having attended university and a further 28 percent having had some formal training over that obtained through the public school system. Whether this information relates to an attribute peculiar to the sample population cannot be established because of the lack of comparable data.

Table 5.10

Distribution of Heads of Households
by Level of Education
(Sample Population: Country Residents)

Category	Frequency	Relative Frequency
Grade 9 or less	22	19.6
Grade 10 to 12	53	35.1
Technical Training	43	28.5
Some University	6	4.0
Bachelor's Degree	13	8.6
Graduate Degree	14	9.3
Total	151	100.0

Source: Country Residential Questionnaire, 1973.

Families: By Occupation, Head of Household

The sample population displayed a diverse variety of occupations (Table 5.11) with unusually high concentrations in the managerial and technical groupings and a relatively low representation in the service and recreational categories when compared with the distribution of the provincial labour force (Table 5.12). Unfortunately, only general comparisons between the two distributions can be made. Table 5.11, which illustrates the occupations of the country residential population is a mixed list (combine occupations and industry). Attempts to made it consistent proved to be futile.

Table 5.11

Distribution of Heads of Households by Occupation
(Sample Population: Country Residents)

Occupation	Frequency	Relative Frequency
Managerial	31	20.5
Transport	10	6.6
Communication	2	1.3
Farmer	2	1.3
Professional and Technical	47	31.1
Sales	13	8.6
Craftsmen	22	14.6
Labourer	13	8.6
Service and Recreation	5	3.3
Other	6	4.0
Total	151	100.0

Source: Country Residential Questionnaire, 1973.

Table 5.12
Distribution of Labour Force by Occupation
Province of Alberta, 1971

Occupation	Relative Frequency
Management	10.10
Professional and Technical	24.10
Clerical	13.10
Sales	7.70
Service and Recreation	13.09
Craftsmen	16.50
Labourers	6.50

Source: Alberta Land Use Forum, 1974.

Employment, Head of Household

At the time of the survey 95 percent of the family heads included in the sample were employed on a full-time basis. Twenty-four percent of the spouses and 45 percent of children aged 16 and over residing at home were also employed on a full-time basis. Further, of the 95 percent of household heads, 73 percent were not self-employed, 25 percent were self-employed, and 2 percent were semi-retired. While a large number of families reported keeping livestock such as horses and large pets (dogs) on their country residences only one reported any intensified agricultural enterprise. The remainder of the sample used their parcels of land for residential purposes only.

THE JOURNEY TO WORK

Ninety-two percent of responding household heads reported commuting to and from work on a daily basis. Of these, the great majority cited

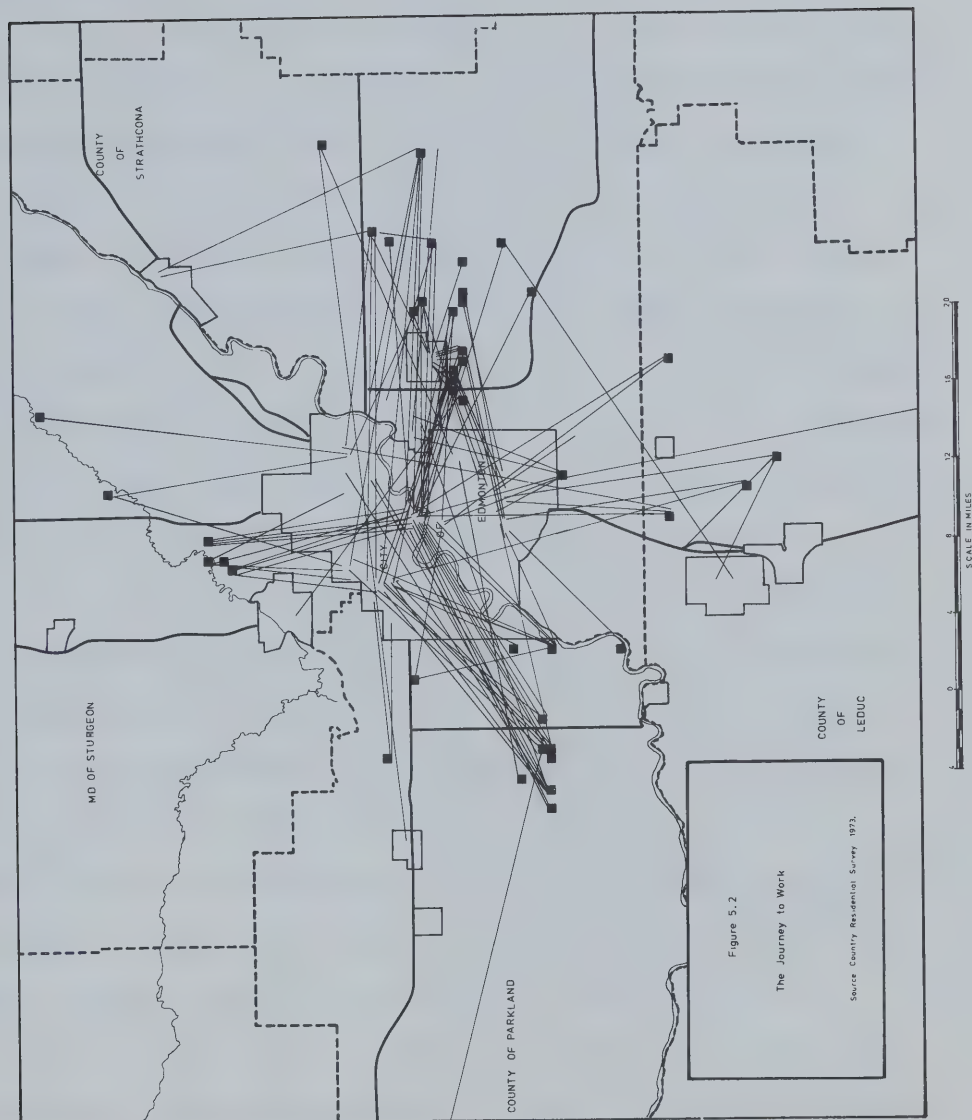
Edmonton as their place of employment; the hamlet of Sherwood Park ranked a distant second (Table 5.13).

Table 5.13
Location of Place of Employment

Category (Centre)	Absolute Frequency	Relative Frequency (Percent)
Edmonton	117	79.6
Sherwood Park	10	6.8
Fort Saskatchewan	2	1.4
Spruce Grove	1	0.7
Morinville	1	0.7
Other	16	10.9
Total	147	100.0

Source: Country Residential Survey, 1973.

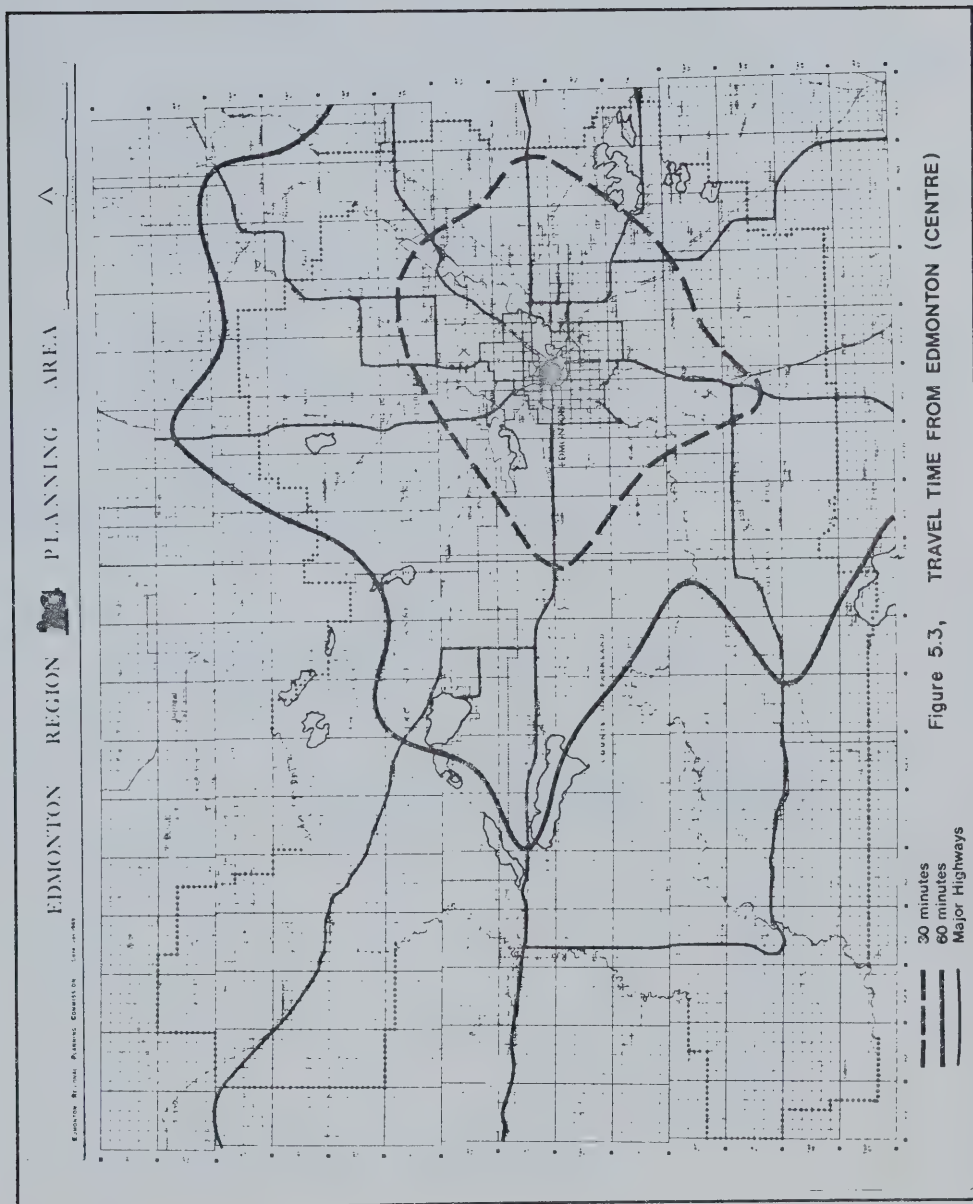
From Figure 5.2, it is evident that the major places of employment within the city were the central downtown area (26 percent), the north-western industrial area (18 percent), and the southeastern sector (11 percent). With the exception of those employed in the central business district of Edmonton and the university area, the respondents showed a marked tendency to locate in country residential subdivisions as close to their place of employment as possible. Some cross-movement exists but the majority of these respondents have located on the same side of the city as they are employed, generally in close proximity



to major hard surfaced arterials. No such directional bias was discernable for those employed in the central city (see Figure 5.2).

The majority of country residents in the sample reported a daily commuting distance (one-way) of less than 20 miles. The most frequently reported time category was 30 to 35 minutes; however, the majority of respondents actually spend less than 30 minutes travelling to or from work. Less than 10 percent of the respondents reported travel times of less than 10 minutes; those that did reside near Sherwood Park and were employed in that centre. Since 88 percent of the sample reported a commuting time of less than 45 minutes, it would be expected that most subdivision and development of a country residential nature would occur within a 45 minute travel time distance of the city centre. This assertion is verified by Figure 5.3, an isochrone map of the study area which indicates the approximate distance that can be travelled within 15 minute time intervals from the city centre. It reveals that few country residential subdivisions can be reached from the city centre within 15 minutes; however, many of the country residents are employed in industrial areas near the city's periphery, a factor which makes a 15 minute journey to work for these people realistic. Most of the intensively subdivided areas are located within the 20 minute isochrone line and virtually all of the subdivisions in the study area can be reached in less than 45 minutes.

The dependence of the country residential population on Edmonton has been and will continue to be one of the most critical factors influencing the pattern of country residential development. This will



Source: Alberta Land Use Forum, Technical Report 4A, 1974, p.60

result in access being a major locational consideration in the siting of subdivisions. The commuting patterns of the rapidly growing urban centres used for comparisons purposes were not available; however, due to the lack of employment opportunity within these centres, a similar dependence on the city is likely.

THE RESIDENTIAL MOBILITY OF THE COUNTRY
RESIDENTIAL POPULATION

The Direction of Movement

The supposition that the major portion of the periurban population in the Edmonton area formerly resided in the city was substantiated by the questionnaire survey (Table 5.14).

Table 5.14

Families by Location of Former Residence

Category	Absolute Frequency	Relative Frequency (Percent)	Cumulative Frequency (Percent)
City of Edmonton	116	76.8	76.8
Rural	26	17.2	94.0
Other Urban	9	6.0	100.0
Total	151	100.0	100.0

Source: Country Residential Survey, 1973.

Of the nine respondents reporting smaller urban centres as their place of former residence, six had lived in Edmonton immediately

prior to that. The movement out from Edmonton to a country residence was a two-stage move for these families, not direct as it was for the majority of respondents. The majority of respondents also stated that they had owned their previous dwelling unit; only 28 percent of them had resided in rental accommodation prior to their move. Virtually all families included in the sample reported owning their present dwelling.

Length of Residence

The discussion of country residential subdivision and development in Chapter 4, revealed that the major activity has taken place since 1968. This was further verified by the length of time that the respondents had resided in their country residence. The majority of the sample (60 percent) had resided in their country residence two years or less; 20 percent reported a length of residence of six years or more; and only 8 percent reported a length of residency greater than 10 years (Table 5.15).

Table 5.16 presents the number of years that the respondents spent in their former dwelling. When compared to the 1971 figures for the City of Edmonton (Table 5.14), it is evident that a considerably lower percentage of the country residents lived in their former dwelling for less than two years than was true for the city at large. Furthermore, except for the 10 years plus category, the sample showed larger concentrations in all other categories. The relatively young age of household heads in the sample population is the most likely reason for the low concentration in the 10 year plus group.

Table 5.15

Duration of Residency in Present Dwelling
(Sample Population: Country Residents)

Duration of Residency	# of Families	% of Total	Cumulative %
Up to 1 year ^a	28	18.5	18.5
1-2 years ^a	63	41.8	60.3
3-5 years ^a	29	19.2	79.5
6-10 years ^a	19	12.6	92.1
Greater than 10 years ^a	12	7.9	100.0
Total	151	100.0%	100.0%

^a Note that the time frames in these categories are irregular.

Source: Country Residential Questionnaire, 1973.

Table 5.16

Duration of Residency in Previous Dwelling
(Sample Population: Country Residents)

Duration of Residency	# of Families	% of Total	Cumulative %
Up to 1 year ^a	3	2.0	2.0
1-2 years ^a	39	25.8	27.8
3-5 years ^a	45	29.8	57.6
6-10 years ^a	50	33.1	90.7
Greater than 10 years ^a	14	9.3	100.0
Total	151	100.0%	100.0%

^a Note that the time frames in these categories are irregular.

Source: Country Residential Questionnaire, 1973.

Table 5.17
Duration of Residency in Present Dwelling
(City of Edmonton)

Duration of Residency	% of Families	% of Total	Cumulative %
Up to 1 year ^a	31,325	23.93	23.93
1-2 years ^a	24,245	18.52	42.45
3-5 years ^a	22,490	17.18	59.63
6-10 years ^a	21,640	16.53	76.16
Greater than 10 years ^a	31,215	23.84	100.00
Total	130,915	100.00	100.00

^a Note that the time frames in these categories are irregular.

Source: Statistics Canada, 1971 Federal Census.

Given the recent growth of the country residential population it is to be expected that a large proportion of the families included in the survey would have changed residence at least once in the last five year period. Therefore, the 48 percent reporting one change in residence in Table 5.18 was not unexpectedly high. Less than 25 percent of the same reported changing residences three or more times during that period. When the age of the population is considered, this figure is very low; therefore, the sample population has tended to be relatively immobile.

Table 5.18

Families by Number of Moves in Last Five Years
(Sample Population - Country Residents)

Category	Absolute Frequency	Relative Frequency (Percent)	Cumulative Frequency (Percent)
no moves	36	23.8	23.8
1 move	73	48.3	72.2
2 moves	20	13.3	85.4
3 moves	12	7.9	93.4
4 moves	6	4.0	97.4
5 moves	3	2.0	99.3
6 moves	1	0.7	100.0
Total	151	100.0	100.0

Source: Country Residential Survey, 1973.

THE DECISION TO MOVE TO A COUNTRY RESIDENCE

The majority of respondents stated that their decision to move to a country residence was not spontaneous, but was a course of action that had been contemplated for quite some time (Table 5.19), indicating that a general dissatisfaction with the environment in which the families resided must have existed some time before the moves took place. When given the opportunity, the families decided to relocate their place of residence to a rural setting. Since the majority of these families moved 'out' from Edmonton, a number of negative 'stress' factors should be identifiable which tended to push to families out, away from the city,

into a rural environment. Conversely, a number of positive factors should be identifiable which tend to pull or attract families to the rural environment.

Table 5.19

The Decision to Move to a Country Residence
(Sample Population: Country Residents)

Type of Decision	Number of Families	Percentage of Total
Spontaneous (brought on by an outside source)	14	9.3
One of several possible alternatives	17	11.3
Considered for some time	115	76.2
Other	5	3.3
Total	151	100.0

Source: Country Residential Questionnaire, 1973.

Negative Stress Factors: Why did Families Leave the City?

Table 5.20 comprises a list of factors identified by the sample respondents as being important in influencing their decision to move to a country residence. It indicates that the families felt confined in the city and that it did not measure up to their perceived ideal environment. The majority of the reasons listed in the table are concerned with this feeling of confinement, though a large proportion of respondents indicated that family considerations were also important.

Table 5.20

Factors Influencing the Decision to Move to a Country Residence
(Sample Population: Country Residents)

Factor	Relative Frequency (%)
Peace and quiet	58.3
Better environment for children and family	49.7
Privacy	39.7
More space than in the city	39.7
Involvement in outdoor activities	31.9
Not crowded, as in the city	25.8
No space for large pets	25.8
Fresh air	25.8
More scenic qualities	21.2
More relaxed way of life	19.9
Fewer restrictions and regulations	17.2
Less traffic than in the city	10.6
Had always lived in the country	9.3
Cheaper land than in the city	6.0
Lower taxes than in the city	5.3

Source: Country Residential Questionnaire, 1973.

A similar distribution is evident in Table 5.21 which is a summation of the responses given for question eight of the questionnaire. The respondents indicated overwhelmingly a desire to live in the country and a desire to leave the city. The most important reasons for this appear to be a quest for privacy, more space, and peace and quiet.

Factors Motivating Families to Leave the City
(Ranked in Terms of Importance as a Percentage of Total)
(Sample Population: Country Residents)

Factor	Relative Frequency (%)
A desire to live in the country	95.3
Lack of privacy in the city	93.4
A desire to leave the city	91.3
Noise	82.4
Lot was too small	77.5
Involvement in outdoor hobbies	70.7
Air pollution	70.0
No safe place for children to play	61.2
The age of the children	58.0
Not enough internal living space	51.4
Cost of relocating in the city	32.6
Taxes in the city too high	31.1
Social deterioration of neighbourhood	23.3
Physical deterioration of neighbourhood	20.7
Increase in family size	17.3
Change in site of employment	15.0 ^a
Increase in accessibility	15.0 ^a
Residence too costly to maintain	10.6 ^a
Change in type of employment	10.6 ^a
Decline in accessibility	6.7 ^a
Decrease in family size	2.0
Decline in family income	0.7

^a In cases where the percentages are the same, the variable with the greatest frequency of very important responses is listed first.

Source: Country Residential Questionnaire, 1973.

Economic variables such as relocation costs, property taxes, increases or decreases in income, and costs incurred in the maintenance of a residence in the city, did not rank highly as motivating stress factors; nor did variables which measure a family's aspirations toward higher social mobility. Familistic variables such as the age of children and concern over their safety did prove to be of considerable concern, as did the family's involvement in outdoor activities, such as horseback riding, appreciation of nature, and gardening.

The percentages presented in Table 5.18 are the combined totals of the 'very important' and 'important' responses given to the variables listed in question eight. The aggregate totals were used to ascertain which variables were the most important to the sample population as a whole. Therefore, the variable actually rated the highest, in terms of the number of 'very important' responses may not be listed first in the tables.

The reasons for moving were cross-tabulated with the length of residence, tenure of former residence, age of family head, age of children, family income, education of family head, and major occupational groups. The five or six variables which received the highest percentage of response are listed for each category. The percentages given are group percentages, not those of the total sample. The results of the cross-tabulations are presented in Tables 5.22 to 5.27.

Table 5.22

Factors Influencing the Decision to Move by Tenure
of Former Residence
(In order of Importance - as a percentage
of group)

Rented	Desire to live in the country	95
	Lack of privacy	95
	Desire to leave the city	90
	Lot was too small	80
	No safe place for children to play	74
	Noise	74
	Involvement in outdoor hobbies	68
	Air pollution	68
Owned	Desire to live in the country	95
	Lack of privacy	93
	Desire to leave the city	92
	Lot was too small	77
	Noise	76
	Involvement in outdoor hobbies	71
	Air pollution	71
	No safe place for children to play	66

In cases where the percentage is the same the variable ranked 'very important' with the greater frequency was given preference.

Source: Country Residential Survey, 1973.

Table 5.23

Factors Influencing the Decision to Move by Age of Family Head
(In order of Importance - as a percent of group)

26 to 35 years	Lack of privacy	95
	Desire to live in the country	95
	Desire to leave the city	94
	Noise	86
	Lot was too small	79
36 to 45 years	Desire to live in the country	98
	Lack of privacy	92
	Desire to leave the city	90
	Noise	86
	Lot was too small	79
46 to 55 years	Desire to live in the country	95
	Lack of privacy	91
	Desire to leave the city	86
	Lot was too small	81
	Noise	71
56 to 65 years	Desire to leave the city	100
	Desire to live in the country	100
	Lack of privacy	100
	Noise	100
	Lot was too small	100

In cases where the percentage is the same, the variable rated 'very important' with the most frequency is given preference.

Source: Country Residential Survey, 1973.

Table 5.24

Factors Influencing the Decision to Move by Age of Children
(In order of Importance - as a percentage of group)

0 thru 5 years	Desire to live in the country	100
	Desire to leave the city	97
	Lack of privacy	96
	Involvement in outdoor hobbies	89
	Noise	86
6 thru 10 years	Desire to leave the city	95
	Desire to live in the country	95
	Lack of privacy	90
	Age of children	87
	Noise	87
11 thru 15 years	Desire to live in the country	97
	Lack of privacy	91
	Noise	91
	Lot was too small	86
	No safe place of children to play	85
16 thru 18 years	Age of children	85
	Desire to live in the country	100
	Lack of privacy	94
	Noise	88
	Desire to leave the city	81
	Lot was too small	75
	Age of children	75
18 years plus	Air pollution	75
	No safe place for children to play	75
	Desire to leave the city	100
	Lack of privacy	100
	Desire to leave the city	92
	Noise	92
	Involvement in outdoor hobbies	83
	Air pollution	83

In cases where the percentage is the same the variable ranked 'very important' with the greatest frequency was given preference.

Source: Country Residential Survey, 1973.

Table 5.25

Factors Influencing the Decision to Move by Family Income
(In order of Importance - as a percentage of group)

\$5,000 to \$9,999.99	Lack of privacy	97
	Desire to live in the country	92
	Desire to leave the city	91
	No safe place for children to play	81
	Noise	78
\$10,000 to \$14,999.99	Desire to live in the country	100
	Lack of privacy	96
	Desire to leave the city	95
	Noise	89
	Involvement in outdoor hobbies	85
\$15,000 and over	Desire to live in the country	93
	Desire to leave the city	88
	Lack of privacy	88
	Noise	79
	Lot was too small	76

In cases where the percentage is the same the variable that rated 'very important' with the greater frequency was given preference.

Source: Country Residential Survey, 1973.

Table 5.26

Factors Influencing the Decision to Move by Education
of Head of Household
(In order of Importance - as a percentage of group)

Grade 9 or less	Desire to live in the country	91
	Lack of privacy	82
	Desire to leave the city	73
	Lot was too small	67
	Noise	62
Grades 10 to 12	Desire to live in the country	93
	Desire to leave the city	90
	Lack of privacy	89
	Noise	87
	Lot was too small	81
Technical Training	Lack of privacy	100
	Desire to live in the country	98
	Desire to leave the city	98
	Noise	86
	Lot was too small	80
University	Desire to live in the country	100
	Lack of privacy	100
	Desire to leave the city	97
	Noise	85
	Involvement in outdoor hobbies	79
	Lot was too small	76

In cases where the percentage is the same the variable rated 'very important' with the greatest frequency was given preference.

Source: Country Residential Survey, 1973.

Table 5.27

Factors Influencing the Decision to Move by Major
Occupational Groups
(In order of Importance -
as a percentage of group)

Managerial	Desire to live in the country	99
	Lack of privacy	99
	Lot was too small	90
	Desire to leave the city	87
	Noise	87
Professional and Technical	Lack of privacy	100
	Desire to leave the city	98
	Desire to live in the country	97
	Noise	83
	Lot was too small	78
Sales	Desire to leave the city	100
	Lack of privacy	100
	Desire to live in the country	99
	Noise	92
	Air pollution	85
	Lot was too small	85
Craftsmen	Desire to leave the city	96
	Desire to live in the country	86
	Lack of privacy	86
	No safe place for children to play	82
	Age of children	76
Labour	Noise	92
	Desire to live in the city	85
	Desire to leave the city	77
	Lack of privacy	77
	No safe place for children to play	77

In cases where the percentage is the same the variable rated 'very important' with the greatest frequency was given preference.

Source: Country Residential Survey, 1973.

In general, the reasons consistently rated highest throughout the different sub-classifications of the sample population reflect the desire expressed by the respondents in Table 5.21; to leave the city and live in the country. The specific push factors which consistently rank the highest throughout all segments of the sample were a lack of privacy in the city, noise, a lot that was too small, and involvement in outdoor activities. It is evident that the existence of these factors, as well as a host of others, helped create a sufficiently high level of dissatisfaction with Edmonton's urban environment and adopt one in which these evils, real or perceived, no longer present a threat to the families' quality of life. Homes in the country were perceived by these families as a solution to or a means of escape from the negative aspects of urban life, while retaining most of the positive aspects being located near a large urban centre.

THE SEARCH FOR A NEW SITE

Sources of Information

The majority of respondents gained their knowledge of the supply of available sites for country residences from newspaper advertisements and driving around the countryside (Tables 5.28 and 5.29). A large proportion of the respondents indicated that the newspapers advertisements were the first to be utilized and after looking at the particular site advertised, they simply drove around the immediate area in search of other suitable subdivisions. Often real estate agencies

were not contacted until a suitable site was located and the prospective buyer wished to obtain information about the price. Thus, in many cases, the prospective country resident was often aware of only a small portion of the total supply of parcels available, usually only those in areas that had experienced a considerable amount of subdivision over an extended period. This is illustrated in Table 5.30 which shows the major areas in which respondents to the questionnaire reportedly searched for a suitable country residential site. Most searched only in areas of major concentration such as Sherwood Park and Ardrossan and the area southwest of the city along the North Saskatchewan river. These are the two oldest areas of concentration, hence knowledge of them would be quite common. Areas such as the Devon township, which are relatively new and underdeveloped, received considerably less attention. This was to be expected of older country residents who had moved out of Edmonton prior to the subdivision 'boom' near Devon, but a fairly large proportion of the newer migrants to other parts of the study area were either not aware of the subdivisions near Devon, or were not interested in them. In fact, with few exceptions, the only people reporting the Devon area as part of their search, were the respondents who actually resided there. In view of this, the distorted pattern of country residential development and the clusters of concentration which have evolved, may result in prospective buyers being ignorant of the total supply of lots available. This, in turn, may increase demand in one area while another, perhaps equally suited for development, may lie under-utilized.

Table 5.28

Families by Source of Information Used

Category	Absolute Frequency	Relative Frequency (Percent)
Newspaper Advertisements	92	61
Friends or Relatives	51	34
Driving around Countryside	115	76
Real Estate Agencies	84	56
Other	2	1

Source: Country Residential Survey, 1973.

Table 5.29

Families by Source of Information Used Most

Category	Absolute Frequency	Relative Frequency (Percent)	Cumulative Frequency (Percent)
Newspaper Advertisement	32	21	21
Friends or Relatives	15	10	31
Driving around Countryside	76	50	81
Real Estate Agencies	27	18	99
Other	1	1	100

Source: Country Residential Survey, 1973.

Table 5.30

Areas Where Search for Country Residents Took Place

Category	Absolute Frequency	Relative Frequency (Percent)
Sherwood Park and Ardrossan	107	71
North of City, along Sturgeon River	47	31
Southwest of City, along North Saskatchewan River	61	40
Sand Dune Area near Devon	41	27
Northwest of City, near Big Lake	35	23
Southeast of City Between Ellerslie and Leduc	50	33
Southeast near Cooking Lake	8	5
West of Stony Plain, near Edmonton Beach	7	5

Source: Country Residential Survey, 1973.

Length of Search

Although the majority of respondents stated that the move to a country residence was something that they had considered for some time, they looked for less than a year and at fewer than 10 parcels before making their choice. Table 5.31 illustrates that 24 percent of the total sample looked at fewer than 10 parcels in less than two months whereas only 10 percent looked at more than 10 parcels over a two year period.

This indicates that a ready supply of suitable country residential parcels is available throughout the study area and that the search

for one can be accomplished in very little time and in an extremely limited search area.

Table 5.31

Number of Months Searched by
Number of Parcels

Number of Parcels		Number of Months					Row Total
		0-2.9	3-5.9	6-11.9	12-23.9	24-99.8	
0-9.9	1	35.0	11.0	9.0	9.0	8.0	72.0
	2	48.6	15.3	12.5	12.5	11.1	49.7
	3	68.6	52.4	60.0	37.5	23.5	
	4	24.1	7.6	6.2	6.2	5.5	
10-19.9	1	7.0	8.0	1.0	7.0	3.0	26.0
	2	26.9	30.8	3.8	26.9	11.5	17.9
	3	13.7	38.1	6.7	29.2	8.8	
	4	4.8	5.5	0.7	4.8	2.1	
20-29.9	1	5.0	1.0	1.0	1.0	8.0	16.00
	2	31.3	6.3	6.3	6.3	50.0	11.0
	3	9.8	4.8	6.7	4.2	23.5	
	4	3.4	0.7	0.7	0.7	5.5	
30-98.9	1	4.0	1.0	4.0	7.0	15.0	31.0
	2	12.9	3.2	12.9	22.6	48.4	21.4
	3	7.8	4.8	26.7	29.2	44.1	
	4	2.8	0.7	2.8	4.8	10.3	
Column		51.0	21.0	15.0	24.0	34.0	145.0
Total		35.2	14.5	10.3	16.6	23.4	100.0

1=Absolute Frequency

3=Column percentage

2=Row Percentage

4=Total percentage

Source: Country Residential Survey, 1973.

FACTORS CONSIDERED IMPORTANT IN THE SELECTION OF SITE

Accessibility to the city is the dominating factor in the selection of a suitable country residential location. This is illustrated in Table 5.32, where four of the ten most highly rated variables are concerned with this factor. Physical characteristics of site such as scenic qualities also ranked very highly and may serve to be the predominant attraction to country living along with the relative quietness of these subdivisions when compared with Edmonton. Other physical factors, such as the availability of water and access to public utility services, were also important factors.

Cross-tabulations between the factors considered in site selection and specific family traits (family income, occupation, and age of head) were calculated (Tables 5.33 to 5.36).

The factors relating to the selection of suitable acreage sites are for the most part non-economic. The only economic factor considered important was the sites' potential for future resale. This was of particular importance to families moving after 1970, with children from 11 to 15 years of age, with family heads 46 to 56 years of age who were earning in excess of \$15,000.00 per year. The price of country residential parcels did not prove to be a major factor in the selection of a particular site.

Table 5.32

Factors Considered Important in the Selection of Site
 (Ranked in Order of Importance: As a Percentage of Total)
 (Sample Population: Country Residents)

Factors	Relative Frequency (%)
Distance from the city	89
Quality of the roads in the area	87
Scenic Qualities	86
Availability of water	83
Public utility services	80
Proximity to a school bus route	79
Distance to schools	79
Size of the parcel	75
Access to major traffic arterials	73
Resale potential	72
Access to shopping facilities	69
Wooded terrain, with open spaces	67
Access to husband's place of employment	67
Soil qualities	66
Upper price limit of land	64
Police and fire protection	63
Reputation of subdivision	59
Hilly, undulating terrain	54
Heavily wooded terrain	40
Proximity to friends and relatives	29
Neighbours of similar socio-economic status	27
Access to spouse's place of employment	23
Flat level terrain	23

Source: Country Residential Questionnaire, 1973.

Table 5.33

Factors Considered Important in the Selection of Site By:
 Year Moved to a Country Residence
 (Ranked in Order of Importance - as a percentage of group)
 (Sample Population: Country Residents)

1954 to 1960	Distance from city	100
	Distance to schools	100
	Availability of water	90
	Size of parcel	90
	Quality of roads	90
1961 to 1965	Quality of roads	92
	Public utility services	83
	Distance to schools	83
	Availability of water	75
	Distance from the city	75
1966 to 1970	Quality of roads	87
	Distance from the city	87
	Scenic qualities	87
	Public utility services	76
	Access to major traffic arterials	76
Past 1970	Distance from the city	92
	Scenic qualities	90
	Availability of water	88
	Quality of roads	87
	Proximity to a school bus route	82
	Resale potential	82

In cases where percentages are the same the variable rated 'very important' with the most frequency was given preference.

Source: Country Residential Survey, 1973

Table 5.34

Factors Considered Important in the Selection of Site By:
 Family Income
 (Ranked in Order of Importance - as a percentage of group)
 (Sample Population: Country Residents)

\$5,000.00 to \$9,999.99	Distance from the city	89
	Quality of roads	88
	Proximity to a school bus route	88
	Availability of water	88
	Distance to schools	84
\$10,000 to \$14,999.99	Quality of roads	95
	Proximity to a school bus route	91
	Scenic qualities	91
	Distance from the city	89
	Size of parcel	87
	Distance to schools	87
\$15,000.00 and over	Distance from the city	90
	Quality of roads	90
	Scenic qualities	86
	Public utility services	75
	Size of parcel	71
	Resale potential	68

In cases where the percentage is the same the variable rated most frequently was given preference.

Source: Country Residential Questionnaire, 1973

Table 5.35

Factors Considered Important in the Selection of Site By:
 Age of Children
 (Ranked in Order of Importance - as a percentage of group)
 (Sample Population: Country Residents)

0 to 5 years	Proximity to a school bus route	93
	Quality of roads	90
	Scenic qualities	90
	Distance to the city	86
	Availability of water	83
6 to 10 years	Proximity to a school bus route	90
	Availability of water	90
	Distance to schools	87
	Public utility services	84
	Distance to the city	84
11 to 15 years	Proximity to a school bus route	96
	Availability of water	88
	Resale potential	86
	Distance from city	85
	Public utility services	82
16 to 18 years	Distance to schools	82
	Availability of water	94
	Distance from the city	88
	Quality of roads	88
	Proximity to a school bus route	88
Past 18 years	Scenic qualities	88
	Distance from the city	92
	Availability of water	83
	Access to major traffic arterials	83

In cases where the percentages are the same the variable with the greatest frequency of 'very important' responses was given preference.

Source: Country Residential Questionnaire, 1973.

Table 5.36

Factors Considered Important in the Selection of Site By:
 Age of Head of Household
 (In Order of Importance - as a percentage of group)
 (Sample Population: Country Residents)

26 to 35 years	Quality of roads	88
	Scenic qualities	86
	Distance from the city	85
	Proximity to a school bus route	79
	Public utility services	79
	Size of parcel	79
36 to 45 years	Distance from the city	96
	Quality of roads	94
	Scenic qualities	88
	Proximity to a school bus route	86
	Availability of water	84
	Access to major traffic arteries	84
46 to 55 years	Distance from the city	100
	Access to major traffic arteries	86
	Resale potential	86
	Public utility services	86
	Quality of roads	86
56 to 65 years	Availability of water	100
	Wooded terrain with open spaces	100
	Scenic qualities	100
	Distance from the city	100
	Quality of roads	83

In cases where percentages are the same, the variable(s) rated 'very important' with the most frequency were given preference.

Source: Country Residential Questionnaire, 1973.

The factors which received the highest rating throughout all segments of the sample population were those measuring the importance of access to the city, schools, and shopping centres. The proximity of a site to an established school bus route was an important locational factor to many respondents as it was felt that this would ensure continuous access to major arterials throughout the winter months.

Physical characteristics of a site, in particular its scenic quality, also ranked very high and in some groups, most notably those with family heads aged 56 years and over, supersede factors of accessibility. The availability of water also rated as a very important factor, though it was usually secondary to a site's aesthetic qualities. Factors relating to surface topography and vegetative cover did not elicit particularly high responses; however, country residents did show a marked preference for sites which were wooded with open spaces on hilly, undulating terrain over the other options specified. Very few respondents indicated a preference for open, flat terrain.

No major differences were discernible between the sub-groups identified. Minor differences in preference were found between groups throughout the tables, but in most cases these were simply the result of the responses of one or two individuals.

Chapter 6

SUMMARY, CONCLUSIONS, IMPLICATIONS

This chapter is organized in two sections. The first section provides a summary of the purpose of the study and the conceptual orientation and methodological approach used in designing the study and analyzing the data. The second section presents the conclusions of the study, draws out their implications, and suggests several aspects worthy of further research.

SUMMARY

Purpose of the Study

The major purpose of the study was to identify and investigate the spatial pattern of country residential land use and development as it has evolved in the environs of the City of Edmonton. To effect this, a number of sub-problems were identified from the literature and were researched. The problems to be solved were to measure the rate at which subdivision and development has occurred; to identify factors which influence both the rate and pattern of distribution; and to determine the need or reason for this form of development.

Conceptual Orientation

A review of related literature identified several theoretical and methodological approaches to the study and analysis of urban fringe

and shadow areas which greatly influenced the objectives and design of this case study.

The conceptual framework for describing the spatial pattern of the outward expansion of a city developed by Russwurm (1971) provided the writer with clear operational definitions of the typical form of exurban development. Russwurm's terminology was used throughout the study to describe exurban development in a spatial context.

Several methods of delimiting the urban fringe and shadow zones were identified from the literature. In most instances these zones have been delimited largely on the basis of population data derived from census sources. In the Edmonton case, the 1971 federal census data could not be used because of two severe limitations. First, the Edmonton Census Metropolitan Area did not include the Counties of Parkland and Leduc. Second, the data were presented in aggregate form and did not differentiate between the farm and non-farm components of the rural population at the enumeration area level. Because of these limitations census data could not be used to either delimit the area of exurban influence or to determine the characteristics of the exurban residents, therefore, alternative methods had to be utilized.

The method used to delimit the extent of exurban development was derived in part from Gertler and Hind-Smith (1962). Intensive surveys were conducted to identify all exurban residential subdivisions in the Edmonton area. The characteristics of the exurban population were

derived from a questionnaire survey. Specific characteristics included in the questionnaire were derived from the literature review, most notably from a number of sociological studies conducted in the fringe areas of large American cities during the 1940s and 1950s. A number of recent Canadian studies (Toronto, 1971; Winnipeg, 1973; Calgary; 1968; Vancouver, 1963) also provided much needed background information for the construction of an 'exurbanite' typology necessary for comparison purposes.

One of the major objectives of the study was to identify factors which contribute to the need for country residential development. Brown and Moore's discussion and model of the residential location decision process provided the framework for the section of the study which pertained to the process of residential mobility. Specific factors that have been identified in other studies as major motivators were tested in order to ascertain their applicability to the Edmonton situation. These included a number of social, economic, psychological, and physical variables. An attempt was also made to determine the search behavior of the country residents in the selection of their new residential site. The conceptual basis for this section was derived from the work of Rossi (1955), Rogers (1969), and Brown and Moore (1970).

Methodology

The study comprised two methodological approaches. Data pertaining to the subdivision and development of land were obtained through intensive field surveys conducted at the municipal offices of the four

local authorities contained in the study area. These data were compiled and synthesized into a summary format which was empirically analyzed with reference to the information obtained through the literature. Data pertaining to the characteristics of the country residential population were obtained through the questionnaire survey. The data were analyzed using basic descriptive statistical techniques (frequency tables, cross-tabulations, chi square tests) and were presented in summary tabular form. The critical value set for the chi square tests was the .05 level of significance.

CONCLUSIONS AND IMPLICATIONS

Answers to the sub-problems and conclusions reached on the basis of the data analysis were incorporated in the findings reported in Chapters 3, 4, and 5. The conclusions presented in this section are limited to those which apply to the study as an example of exurban residential growth. They should be regarded as being complementary to the findings reported in the above chapters.

Conclusions and Implications

- (1) Exurban residential growth in the Edmonton area has assumed a pattern that is characteristic of most major North American cities.

Country residential development in the Edmonton area has assumed a pattern of 'outward expansion' very similar to that identified in the literature as being characteristic of North American cities. While

the majority of new growth has been concentrated in fully serviced residential subdivisions located in the smaller urban centres surrounding Edmonton, an increasingly larger proportion is locating on large lot country residential subdivisions situated in a rural setting and provided with only rudimentary services. This form of development has assumed a pattern of distribution very similar to that expressed by Russwurm (1971) in his work Urban Fringe and Urban Shadow with the major characteristics of his four zones being readily discernible. No attempt was made in the study to identify these zones in any precise way but their characteristic components are readily observable.

While the pattern of growth is similar, the physical form of the country residential subdivisions differs considerably from those described in the literature. While the issue is quite confused, the bulk of the American literature reviewed described exurban subdivision as being 'urban' subdivisions in a rural setting. Characteristically, these subdivisions are comprised of lots somewhat larger than those found in the built up city but considerably smaller than what is present in the Edmonton area. Development is usually much denser and the demand for urban services such as public transportation and shopping facilities are much stronger than is the case in Edmonton.

- (2) The purpose of the country residence has changed considerably over time from a quasi-agricultural use to an almost exclusive residential use.

Prior to the mid-1960s, the majority of country residential parcels

in the Edmonton area were intended to be developed as small agricultural holdings. Building standards were relatively low and a lack of effective development control permitted many low income families to erect small dwellings or move older dwellings onto lots. By the 1970s the role of the country residence in the urban housing market had changed dramatically to the extent that new exurbanites represented different socio-economic segments of society.

Similar transitions in other metropolitan areas are well documented throughout the literature. Many of the early studies on urban fringe development report conditions similar to those which existed in the Edmonton area. These studies characterized the typical fringe resident as being of relatively low income, uneducated with large families, and engaged in part-time farming. These people were attracted to the fringe for largely economic reasons such as lower taxes, inexpensive land, and fewer building restrictions (Rodehaver, 1947; Lower Mainland Regional Planning Board, 1963). However, more recent studies typify the exurbanite as being well educated, with higher than average income and slightly larger than average families. The result of this has been that the fringe has been transformed from a haven of the rural poor to an almost exclusive residential area for the upper middle class (Patterson Planning and Research Limited, 1971; 1973; Calgary Regional Planning Commission, 1968).

- (3) Institutional controls have had a minimal impact on the pattern of country residential development.

Institutional controls or the lack of them have been identified as one of the major contributors to fringe development. The lack of a comprehensive approach to the planning of country residential land uses throughout the study area has created the situation where the Edmonton Regional Planning Commission has all but lost control over this form of land use. Land use legislation in the Edmonton area is concerned primarily with technical considerations such as lot sizes and permitted uses. Scant attention has been given to the supply of lots, the impact of development on the rural social structure, municipal costs of development and the impact of development on the physical environment. Through legislation, local planning agencies have had an impact of the supply of lots, the distribution of lot size, and to some extent, location. Little consideration has been shown for rural land uses other than high order agricultural production. The mechanisms for more restrictive control over land uses do exist but, the planning commission is hesitant or perhaps unwilling to use them. Present planning policies can best be described as reactionary rather than preventative. This has allowed the causal factors of fringe development noted in the literature review to dictate development in the Edmonton area.

In view of the fact that a minimum four year supply of undeveloped lots exists throughout the study area, the Edmonton Regional Planning Commission should impose a moratorium on further subdivision for a minimum period of two years. This period of time would allow the Commission's planners sufficient time to conduct the resource inventories and socio-economic studies necessary to prepare a comprehensive framework

for the control of country residential land use throughout the study area. It is essential that this be effected. At the present time, the Commission does not know what the carrying capacity of the study area is for country residential development. If major environmental and social problems are to be avoided, country residential land use must be controlled. A mechanism that would give the Commission legal recourse over developers who subdivide land under the guise of agricultural or resort residential uses only to have them evolve into country residences should be entrenched into Provincial Planning legislation. This would give the Commission effective control over the subdivision after it has been registered.

- (4) The competition for land in Edmonton's fringe and shadow has resulted in the loss of prime agricultural land.

A major characteristic of fringe development around major urban centres is the loss of good agricultural land to urban oriented uses. This is usually the result of the competition for land, in which case the urban use generates a much higher short-term economic return than does the agricultural, or excessive property taxation in which case agricultural land is assessed and taxed at its market value, not its value for agricultural productivity. This second factor is not an issue in the Edmonton area because of the fixed assessment on agricultural land.

Prime agricultural land in Edmonton's periphery has been subjected to increasing pressure from developers for subdivision and development. No attempt was made in this study to measure the full impact of country

residential development on rural land uses, but several general statements based on the data analyzed can be made. Due to a change in purpose (from agricultural to residential) less high quality agricultural land is being converted to country residential purposes in recent years. Institutional attempts to restrict development of high quality agricultural land have proven to be only marginally successful. This is due in part to inconsistency in implementing Commission policy and a lack of coordination between the Provincial Planning Board and the Regional Planning Commission in the case of subdivision appeals. The Competition for land has resulted in rapidly escalating rural land prices in recent years. Country residential parcels have proven to be attractive for speculative purposes, a circumstance which has created a false demand for subdivided parcels of land and has been a major contributor to the apparent oversupply of lots in the study area (Mukasa, 1976). The conversion of land from agricultural to country residential purposes has not been regarded as a serious problem in the Edmonton area to date; however, its impact on agricultural real estate prices and land uses has not been determined and should be investigated much more fully.

- (5) The predominant factor influencing the pattern of subdivision and development is access to the City of Edmonton.

Access to the city and dependence on the private automobile for transportation have been identified throughout the literature as one of the major causes and locational determinants of exurban residential

development. The country residential population is almost totally dependent on Edmonton for employment, shopping, and to some extent entertainment, a characteristic typical of fringe development. This has necessitated daily journey to work migrations to and from the city. Accessibility has proven to be the single most important locational factor influencing the pattern of subdivision and development. Physical factors such as the availability of groundwater, the sites scenic quality, and the land's potential for recreational and wildlife production, also identified in the literature as being major locational criteria, while present, have not had an appreciable effect on the distribution of country residential land use. In areas possessing exceptional scenic qualities, in particular water bodies, this factor has superseded access as a locational determinant (Mukasa, 1976). A similar trend was noted by Rossi (1955) and the Lower Mainland Regional Planning Commission (1963).

As has been the case in other medium sized western Canadian cities, most country residential subdivisions in the Edmonton area have been located within three miles (five kilometers) of a paved roadway. Subdivisions near highways have tended to develop more rapidly than have others. The areal distribution of country residential subdivisions extends outward from the city in an elliptical manner entered by major highways. A distance decay effect is readily observable as few subdivisions have been located further than 25 miles (40 kilometers) from the city limits.

The majority of exurbanites travel less than 20 miles (32 kilometers) or 45 minutes, one way, during their journey to work. With the exception of those employed in the central city, country residents demonstrate a distinct directional bias between their residence and their place of employment which can be directly linked to accessibility. Exurban residential development is facilitated by the location of employment nodes and shopping centres near Edmonton's periphery.

- (6) The predominant factor motivating families to move to the fringe was a lifestyle preference for country living.

The dream of a life in the country, an arcadian tradition that is very strong in Britain and North America, was the central motivating factor which has fostered the demand for country residential development in the Edmonton area. Factors concerned with a feeling of confinement and an unhealthy urban environment were identified as being the major negative stress factors which motivated families to move to the country from Edmonton. These factors are essentially the same as those which fostered the 'Garden City' movement in Britain and North America in the late 19th century. It is evident that a latent dissatisfaction exists toward urban life, and given the opportunity, a sizeable portion of the population would opt for a life in the country.

Many of the social and economic factors prevalent in the literature such as increased family size; increased family income; increased social status; and so on have also played minor roles. The move to a country residential was something that the families had considered for some time. Increases in a family's social status or income may

have made the move possible, but it was the desire for a rural lifestyle that prompted it in the first place. The implication of this to exurban residential development in the Edmonton area is that as real incomes increase, the demand for country residences will increase proportionately. As the great majority of country residents previously owned a dwelling in Edmonton it is probable that the demand for country residences is closely linked with fluctuations in the urban housing market in Edmonton.

- (7) The characteristics of the country residential population are typical of fringe residents in other North American cities.

The study concluded that the characteristics of the country residents in the Edmonton area are similar to those identified in recent studies of other major Canadian metropolitan areas. The population comprises the same general characteristics of exurbanites that are evident throughout the literature. The population studies compared closely to those identified in recent studies of the Toronto and Winnipeg fringe and shadow zones. The country residents are strongly family based and consist of primarily young families with middle to upper incomes with well educated family members. The families are slightly larger than average and value home ownership. The population contains few single person households and few families whose heads are unemployed. The results of this study provide further evidence of the contention stated in the literature review: that the population

characteristics of fringe dwellers tend to be remarkably similar with only slight variations being evident between different cities and geographic regions.

- (8) With the exception of income, the country residential population is not noticeably different from that of urban growth centres.

Most studies of exurban residential growth do not make the distinction between the urban component of the rural nonfarm population and the rural component. This distinction was made in this study and comparisons were effected between the two sub-groups. The two groups are similar in most respects as both groups have recently migrated from the central city and exhibit similar population characteristics. The major difference between the two populations is that of family income. One other variable, for which no comparisons were made, was that of previous home ownership. The country residential population does not only have higher average incomes but consists largely of former home owners. The possibility therefore exists that equity gains made through the resale of urban real estate is a major economic factor in determining the potential demand for country residences. If this is the case, this form of development would be largely limited to those persons presently owning real estate. This supposition has not been verified in this study and should be the topic of further research.

Summary

This case study of exurban population growth serves to substantiate

much of the general literature on urban fringe development. The forces of urban population growth, the competition for land, technological advancement, and the manifestation of individual rights are all present in the Edmonton area, and are working in much the same way as they have worked elsewhere. An institutional awareness of individual rights is reflected in a local planning policy which has been hesitant to infringe on private property rights and which can best be described as reactionary rather than preventative. This, coupled with a system which is slow to react, has allowed country residential development to occur subject to only minimal control. Because of the rapid growth of this form of development, the planning authorities have not had the available resources necessary to conduct essential physical resource inventories and socio-economic studies necessary to construct a conceptual framework from which development could be guided in the future. It is therefore recommended that a minimum two year moratorium be implemented on future subdivision in the study area so that these studies may be effected.

The major conclusion gained from this study is that Edmonton is experiencing the same form of growth as other centres in North America. This growth is extremely recent and planning authorities have not been able to react quickly enough to control it adequately. The Edmonton area has been fortunate so far in that few of the major problems associated with fringe development have been at issue; however, as development accrues and densities increase, this is likely to change.

In a regional planning context, country residential development is extremely important as it is one of the major causes of escalating land values in the fringe and shadow zones. An upper limit of allowable development should be ascertained as the needs and demands of this population may be considerably different from that of the characteristic rural 'farm' dweller and that of smaller urban centres. The impact that a large scale in-migration, or perhaps invasion, of exurbanites has and will have on the rural society adjacent to Edmonton should be thoroughly researched in order to ensure that traditional lifestyles and values are not needlessly disrupted or destroyed.

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APPENDIX I

THE COUNTRY RESIDENTIAL QUESTIONNAIRE

COUNTRY RESIDENTIAL SURVEY

NAME OF SUBDIVISION _____

LOT NUMBER _____

LEGAL DESCRIPTION _____

Dear Sir:

The Department of Geography at the University of Alberta is conducting a study on the development of country residential subdivisions within commuting distance of the City of Edmonton. This questionnaire is an integral part of this study as its purpose is to identify the demographic characteristics of the country residential population, and the reasons behind the demand for this type of development.

All information collected will be treated with the strictest confidence and will be used only for statistical purposes. The success of this study depends directly on the information gathered in this questionnaire. With this in mind would you please complete the questionnaire and return it in the self-addressed postage-paid envelope attached.

Copies of this study will be sent to the Edmonton Regional Planning Commission, and the Municipal or County offices which are concerned.

Thank you for your time and cooperation.

Yours truly,

R. G. Ward
Roland G. Ward

RGW/eb
Encl.

P.S. For information regarding the questionnaire Ph. 432-5626.

1

1. What year did you move to your country residence? _____
2. Did you reside in the City of Edmonton before moving into your present residence? _____ Yes. _____ No.
If you did not, was your former residence
() a. Rural? (please indicate the nearest urban centre.) _____
() b. Urban? (please indicate the name of the centre.) _____

If the answer is no, disregard question 3.

3. In which general area of Edmonton was your former residence located?
() 1. North West () 4. South West
() 2. North East () 5. South East
() 3. Central
4. How many times has your household moved in the last five years? _____
5. How many years had you lived at your former residence prior to your move to an acreage? _____ During this time did you (a) Rent _____ or (b) Own _____ the residence?
6. Was the decision to move to a country residence
() 1. Spontaneous--brought on suddenly from an outside source?
() 2. One of a choice of several possible alternatives?
() 3. Something that you had been considering for some time?
() 4. Other? (please specify) _____

2

7. Why did you choose to live in the country as opposed to living in the city? (please give as many reasons as possible.) _____

8. Please rate the importance that each of the following factors had in stimulating your decision to move to a country residence.

NI - no importance (was not considered)

I - important (something which was considered)

VI - very important (a main factor)

	NI	I	VI
1. Increase in family income	—	—	—
2. Change in type of employment	—	—	—
3. Decrease in family size	—	—	—
4. Age of the children	—	—	—
5. Change in site of employment	—	—	—
6. Increase in family size	—	—	—
7. Decline in family income	—	—	—
8. Decline in accessibility to the rest of the City	—	—	—
9. Physical deterioration of the neighbourhood	—	—	—

3

NI I VI

- | | | | |
|--|-----|-----|-----|
| 10. Social deterioration of the neighbourhood | --- | --- | --- |
| 11. Air pollution | --- | --- | --- |
| 12. Noise pollution | --- | --- | --- |
| 13. Increase in accessibility to the rest of the City | --- | --- | --- |
| 14. Lack of privacy in the City | --- | --- | --- |
| 15. Not enough internal living space in former residence | --- | --- | --- |
| 16. Residence was too costly to maintain | --- | --- | --- |
| 17. Taxes were too high | --- | --- | --- |
| 18. Lot was too small | --- | --- | --- |
| 19. No safe place for children to play | --- | --- | --- |
| 20. A desire to get out of the City | --- | --- | --- |
| 21. Involvement in outdoor hobbies (horseback riding, etc.) | --- | --- | --- |
| 22. The cost of relocating in the City relative to the country | --- | --- | --- |
| 23. A desire to live in the country | --- | --- | --- |
| 24. Others (please specify) | | | |
| (1) _____ | --- | --- | --- |
| (2) _____ | --- | --- | --- |
| (3) _____ | --- | --- | --- |
| (4) _____ | --- | --- | --- |
9. Which of the following sources of information did you utilize in your search for a suitable acreage. (choose as many as are applicable)
- () 1. Newspaper advertisements
- () 2. Friends or relatives
- () 3. Driving around the countryside
- () 4. Real Estate Agencies
- () 5. Others (please specify) _____

4

10. Which of the above did you utilize the most? _____
(indicate the number of the choice)
11. From the time you decided to move to a country residence,
how long did it take you to find a suitable acreage
location? _____
12. Approximately how many small acreage parcels did you look
at before selecting this particular one? _____
13. In your search for a suitable acreage in which of the
following areas did you look? (you may choose more than
one)
- ☐ 1. The area around Sherwood Park and Ardrossan
- ☐ 2. North of Edmonton, along or near the Sturgeon
Valley
- ☐ 3. West and South of Edmonton, along the North
Saskatchewan River
- ☐ 4. In the sand dune area near Devon
- ☐ 5. North and West of Edmonton near Big Lake and
St. Albert
- ☐ 6. South of Edmonton between Ellerslie and Leduc
- ☐ 7. Others (please specify) _____

14. When you were looking for a suitable location, how
important were each of the following factors in the
evaluation of specific sites. (NI, I, VI, same as No. 7)
- | | NI | I | VI |
|------------------------------|----|---|----|
| 1. Size of the parcel | — | — | — |
| 2. Flat level terrain | — | — | — |
| 3. Hilly, undulating terrain | — | — | — |

	5		
	NI	I	VI
5. Heavily wooded terrain	—	—	—
6. Wooded terrain with open spaces	—	—	—
7. Availability of water	—	—	—
8. Scenic qualities	—	—	—
9. Soil qualities (drainage, agriculture)	—	—	—
10. Accessibility to husbands place of employment	—	—	—
11. Accessibility to spouse's place of employment	—	—	—
12. Distance from the City	—	—	—
13. Quality of roads in the area	—	—	—
14. Accessibility to shopping facilities	—	—	—
15. Distance to schools	—	—	—
16. Proximity to a school bus route	—	—	—
17. Proximity to friends or relatives	—	—	—
18. Public utility services	—	—	—
19. Police and fire protection	—	—	—
20. Accessibility to major traffic arteries	—	—	—
21. Reputation of the area or subdivision	—	—	—
22. Neighbours of similar socio-economic levels	—	—	—
23. Upper price limit of land	—	—	—
24. Lower price limit of land	—	—	—
25. Resale potential	—	—	—
26. Others (please specify)			
(1) _____	—	—	—
(2) _____	—	—	—
(3) _____	—	—	—

6

15. Do you conduct any commercial or agricultural activity on your acreage? ____ Yes. ____ No.

If you do, which of the following categories would these activities fall under. (you may check more than one)

- () 1. Market gardening
 () 2. Tree nursery
 () 3. Greenhouse
 () 4. Forage crops
 () 5. Livestock
 () 6. Other (please specify)

16. What proportion of your total gross income would be derived from these activities? _____

17. Do you raise or keep any livestock for purposes other than financial gain? (pets, etc.) ____ Yes. ____ No.

If "Yes" please indicate the type and number of animal(s).

1. _____
 2. _____
 3. _____

18. Which of the following members of this household are currently employed? (please check approximate category)

	Unem- ployed	Part Time	Full Time
1. Head of household	_____	_____	_____
2. Spouse	_____	_____	_____
3. Children over 16 years	_____	_____	_____
(if no children leave blank)			

7

19. Is the head of the household
- (a) self-employed? ____ Yes. ____ No.
- (b) retired? ____ Yes. ____ No.
20. Do you commute to and from work on a daily basis?
- ____ Yes. ____ No.
21. What is the distance from your residence to your place of employment? ____ miles (head of household)
22. What length of time does it take you to travel from your residence to your place of employment? ____ minutes
23. In which of the following centres are you employed?
- (choose one of the following)
- | | |
|---------------------------|------------------------------------|
| (__) 1. Edmonton | (__) 6. Devon |
| (__) 2. Sherwood Park | (__) 7. St. Albert |
| (__) 3. Ft. Saskatchewan | (__) 8. Leduc |
| (__) 4. Stony Plain | (__) 9. Morinville |
| (__) 5. Spruce Grove | (__) 10. Other _____
(specify) |
24. If you are employed in the City of Edmonton, please indicate the general location of your place of employment.
- | | |
|---------------------|---|
| (__) 1. North East | (__) 5. Central |
| (__) 2. North West | (__) 6. Industrial Complex
(County of Strathcona) |
| (__) 3. South East | (__) 7. Other _____
(specify) |
| (__) 4. South West | |
25. What age category did the head of the household fall into at the time you moved to your country residence?
- | | | |
|-------------------|-------------------|-------------------|
| (__) 1. 0 to 25 | (__) 3. 36 to 45 | (__) 5. 56 to 65 |
| (__) 2. 26 to 35 | (__) 4. 46 to 55 | (__) 6. 66 plus |

8

26. What was the highest level of education completed by the head of the household at the time of moving? (check one)
- ☐ 1. Grade 9 or less
 - ☐ 2. Grade 10 to 12
 - ☐ 3. Technical Training
 - ☐ 4. Some University
 - ☐ 5. Bachelor Degree
 - ☐ 6. Graduate Degree (Master's, Ph.D., M.D., etc.)
27. Which of the following best describes the occupation of the head of the household? (check one of the following)
- ☐ 1. Managerial
 - ☐ 2. Transport
 - ☐ 3. Communication
 - ☐ 4. Farmer
 - ☐ 5. Professional and Technical
 - ☐ 6. Sales
 - ☐ 7. Craftsman
 - ☐ 8. Laborer
 - ☐ 9. Service and Recreation
 - ☐ 10. Other (please specify)
28. What is your households total annual gross income before taxes? (choose the approximate category)
- ☐ 1. under \$5,000
 - ☐ 2. \$5,000 to \$9,999
 - ☐ 3. \$10,000 to \$14,000
 - ☐ 4. over \$15,000

APPENDIX II

DEVELOPMENT REGULATIONS
COUNTY OF PARKLAND NO. 31

SITE AND DEVELOPMENT REGULATIONS

1. Livestock:

a. Country Residence A (1-3 acres)

1. No livestock
2. Household pets allowed

b. Country Residence B (3-20 acres)

1. 1 cow and calf for each 4 acres
2. 2 horses for each 4 acres
3. 4 chickens per acre
4. 4 dogs maximum

NOTE: Any combination of two of the above may be kept at one time, in an orderly and sightly manner on the property.

Subject to inspection at any time by the Development Control Department representative.

2. Auto Wreckages:

- a. Definition: Auto wreckages shall be defined as a development which involves the storage of more than three (3) inoperative vehicles whether for the purpose of resale or not.

b. Location:

1. These developments shall be located on a local road, a minimum of 1,320 feet from any intersection.
2. These developments shall not be located closer than 2 miles to a town, city or village without favourable recommendation of the town, city or village affected.
3. These shall only occur or develop through proper development application to the Development Control Department, County of Parkland No. 31.

c. Site restrictions per Auto Wreckage Areas:

1. No fence or structure shall be located closer than 150 feet from the center line of the Municipal or County road, or 200 feet from the center line of a proposed secondary highway.
2. There shall be an 8 foot high solid fence provided on a minimum of 3 sides.
3. Height of storage hulks shall not exceed the height of the fence.
4. Maximum acreage for storage of such auto wreckage development shall be 5 acres.

d. Performance Standards:

1. All vehicles will be stored within the enclosed area.
2. The final disposal of the stripped hulks shall be the responsibility of the owner.

3. The fence and structures shall be painted uniformly and shall be maintained in a tidy manner.
 4. The location and size of the advertising and identification signs shall be subject to the approval of the County through the proper development application procedure.
3. General Site Appearance Restrictions of Any Parcels of Land Under Development Control Within the County of Parkland No. 31:
- a. There shall be no garbage, debris, unsightly buildings, unfounded buildings, or any defective objects on any lot or parcel of land, inhabited or not inhabited, containing less than 41 acres.
 - b. These sites if so created and deemed necessary for cleanup by the Development Control Officer, action shall be initiated in the form of a development order, allowing a given number of days for the cleanup or stated requirement to take place; a registered letter may be sent to the land owner stating the problem and solution, and if further contravention of the above exists the person may be liable to a summary conviction and if deemed so further a court injunction.

Frank Florkewich
Development Control Department
County of Parkland No. 31

DEVELOPMENT REGULATIONSCOUNTY OF PARKLAND NO. 31DEVELOPMENT APPLICATIONS AND PERMITS

No development other than that deemed approved previously or constituted as agricultural on parcels over 41 acres of land shall be undertaken within the County of Parkland unless an application for development has been approved and a development permit has been issued.

An application for a development permit shall be made to the Development Officer in writing in the form set out or issued by that department and shall be accompanied by

- a) a site plan in duplicate showing the legal description and the front, rear and side yards, if any, and any provisions for off street loading and vehicle parking
- b) floor plans and elevations and sections in duplicate
- c) a statement of uses
- d) a statement of ownership of land and interest of the applicant therein
- e) the estimated commencement and completion dates.

Development Officer shall receive, consider and decide on all applications for development permits and if approval or rejection is determined by County Bylaw or Resolution the decision shall be given in the form of the development permit stating refusal and the reason for refusal. If the development applied for constitutes rezoning of lands, has questionable involvements on surrounding areas etc., the development application will be dealt with before the Interim Development Board consisting of the County Council, member of staff of the Edmonton Regional Planning Commission and the Development Officer. The applicant is able at this point to be present and present the development application verbally or be available for any questions or necessary information.

Upon receiving a development permit refused by the Development Officer the applicant has the right of appeal which is stated on the bottom of the development permit for procedure of appeal.

In making a decision the Development Officer may approve the application unconditionally, or impose conditions considered appropriate, permanently or for a limited period of time or refuse the application.

In a case where an application for a development permit has been refused by the Development Control Department or ultimately at an appeal hearing the submission of another application for a permit on the same parcel of land and for the same or similar use of the land, by the same or any other applicant may not be accepted by the Development Officer for at least six months after the date of the previous refusal.

An application for a development permit shall be deemed to be refused when a decision thereon is not made on it by the Development Officer within 40 days after receipt of the application.

A permit granted does not come into effect until 17 days after the notice of decision is mailed to the applicant and any construction proceeds with by the applicant prior to the expiry of this period is

done solely at the risk of the applicant. Upon receipt of an application for development changing the existing use of the land on which the development is to be situated a notice in writing is to be mailed within 3 days of the date on which the decision is made to all property owners whose land is situated within 300 feet of the property for which the application has been made and a notice to be published within 7 days of the date of which the decision is made in a newspaper (Elroy Plain Reporter) circulated in the County of Parkland stating the location of the property for which the application has been made and the use approved or requesting public or written approvals or objections.

If the development authorized by a permit is not commenced within 12 months of the date of its issue or carried out with a reasonable diligence the permit is deemed to be void, unless an extension to this period has previously been granted by the Development Officer.

A decision made through an appeal to Council is final and binding on all parties subject only to an appeal upon a question of jurisdiction or law pursuant to section 146 of the Planning Act.

CONTRAVENTION (ENFORCEMENT AND ADMINISTRATION)

Where a person commences development on any land and fails or neglects to obtain a development permit or to comply with conditions of a development permit or does any act or anything which contravenes any of the provisions of the permit or decision made under it, the Development Officer may submit upon his written notice requiring him to immediately to comply in the form of a "Stop Work" order, a development order, or registered letter and if need be shall be reported to Council or can be prosecuted under section 139 and 138 of the Provincial Planning Act.

The Development Control Department upon issuing a development permit may do so in conjunction with permits issued by other governmental departments such as Department of Highways, Department of Health etc., if affected by the development location or restrictions set forth concerning such development.

Frank Florkewich
Development Control Department
County of Parkland No. 31

REQUEST FOR DUPLICATION

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